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# STUDY OF MEDICINE,

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CLASS V.

CLASS V.

GENETICA.

DISEASES OF THE SEXUAL FUNCTION.

ORDER I.

CENOTICA.

AFFECTING THE FLUIDS

II.

ORGASTICA.

AFFECTING THE ORGASM.

III.

CARPOTICA.

AFFECTING THE IMPREGNATION.



## CLASS V.

### PHYSIOLOGICAL PROEM.

WE now enter upon the maladies of that important function by which animal life is extended beyond the individual that possesses it, and propagated from generation to generation. To this division of diseases the author has given the classic name of GENETICA, from γείνομαι, “gignor,” whence genesis (γένεσις), “origo,” “ortus.”

CLASS V.  
Origin of  
classic  
name.

In almost every preceding system of nosology the diseases of this function are scattered through every division of the classification, and are rather to be found by accident, an index, or the aid of the memory, than by any clear methodical clue. Dr. Macbride's classification forms the only exception I am acquainted with; which, however, is rather an attempt at what may be accomplished, than the accomplishment itself. His division is into four orders; general, and local as proper to men, and general, and local as proper to women; thus giving us in the ordinal name little or no leading idea of the nature of the diseases which each subdivision is to include, or any strict line of division between them; for it must be obvious that many diseases commencing locally very soon become general and affect the entire system, as obstructed menstruation; while others, as abortion, or morbid pregnancy, may be both general and local.

The diseases of the system hitherto scattered loosely over the entire class. Macbride made an attempt at simplification; but an attempt alone.

Under the present system, therefore, a different arrangement is chosen, and one which will perhaps be found

CLASS V.  
Ordinal  
divisions  
under the  
present ar-  
rangement.

not only more strict to the limits of the respective orders, but more explanatory of the leading features, of the various genera or species that are included under them. These orders are three: the first embracing those diseases that affect the sexual fluids; the second those that affect the orgasm; and the third those that affect the impregnation. To the first order is applied the term CENOTICA (κενώτικα) from κένωσις "evacuatio," "exinanitio," to the second ORGASTICA (ὀργαστικά) from ὀργάζω "irrito," "incito," and especially libidinose; and to the third CARPOTICA (καρπώτικα) from καρπός, fructus."

Survey of  
the general  
nature of  
the present  
function.

Before we enter upon these divisions, it will perhaps prove advantageous to pursue the plan we have hitherto followed upon commencing the preceding classes, and take a brief survey of the general nature of the function before us, under the following heads:

#### I. THE MACHINERY BY WHICH IT OPERATES.

#### II. THE PROCESS BY WHICH IT ACCOMPLISHES ITS ULTIMATE END.

#### III. THE DIFFICULTIES ACCOMPANYING THIS PROCESS WHICH STILL REMAIN TO BE EXPLAINED.

I. Ma-  
chinery of  
the genera-  
tive func-  
tion.

I. One of the chief characters by which animals and vegetables are distinguished from minerals, is to be found in the mode of their formation or origin. While minerals are produced fortuitously or by the casual juxtaposition of the different particles that enter into their make, animals and vegetables can only be produced by generation, by a system of organs contrived for this express purpose, and regulated by laws peculiar to itself.

Generation  
effected in  
two ways.

Generation is effected in two ways: by the medium of seeds or eggs, and by that of offsets: and it has been supposed that there may be a third way, to which we shall advert hereafter; that of the union of seminal molecules, furnished equally by the male and the female, without the intervention of eggs, which constitutes the leading principle of what has been called the theory of epigenesis.

Theory of  
epigenesis,  
what?

Many plants are propagable by offsets, and all plants

are supposed to be so by eggs or seeds. As we descend in the scale of animal life we meet in the lowest class, consisting of the worm tribes, with examples of both these modes of propagation also. For while a production by ova is more commonly adhered to, the hydra or polype is well known to multiply by bulbs or knobs thrown forth from different parts of the body, and the *hirudo viridis*, or green leech, by longitudinal sections, which correspond with the slips or suckers of plants.

In these cases we meet with no distinction of sex; the same individual being capable of continuing its own kind by a power of spontaneous generation. In other animals of the worm class we trace examples of the organs of both sexes united in the same individual, making a near approach to the class of monoicous plants, or those which bear male and female flowers distinct from each other but on the same stock, as the cucumber: thus constituting proper hermaphrodites, evincing a complexity of sexual structure which is not to be found in any class of animals above that of worms. Some of the intestinal worms are of this description, as the fasciola or fluke, which is at the same time oviparous, the ovaries being placed laterally.

The *helix hortensis*, or garden-snail, is hermaphrodite, but incapable of breeding singly. In order to accomplish this, it is necessary that one individual should copulate with another, the male organ of each uniting with the female, and the female with the male, when both become impregnated. The manner in which this amour is conducted is singular and highly curious. They make their approach by discharging several small darts at each other, which are of a sharp form, and of a horny substance. The quiver is contained within a cavity on the right side of the neck, and the darts are launched with some degree of force, at about the distance of two inches, till the whole are exhausted; when the war of love is over and its consummation succeeds. The increase is by eggs which are perfectly round and about the size of small peas.

There are some animals in which a single impregnation is capable of producing several generations in suc-

CLASS V.

I. Machinery of the generative function.

Plants propagable both by offsets and eggs or seeds.

The lowest class of animals propagable in both ways also.

Illustrated.

In these cases no distinction of sex.

In others of the same class examples of both male and female organs in the same individuals, as in monoicous plants.

Hence hermaphrodites.

Fasciola or fluke.

*Helix hortensis* or garden-snail.

Curious process of intercourse.



CLASS V.  
I. Machinery of the generative function.

A single impregnation sufficient in some animals for the production of several generations in succession. Aphis, puceron or green-plant louse.

Singular variety in the mode of production.

Some offspring viviparous others oviparous.

Some winged others wingless, and without distinction of sex.

Generative process among bees as discovered by the Hübers.

cession : we have a familiar example of this in the common cock and hen ; for a single copulation is here sufficient to give fecundity to as many eggs as will constitute a whole brood. But the same curious fact is still more obvious in various species of insects, and especially in the aphis (puceron or green-plant louse) through all its division, and the *Daphnia Pulex* of Müller and Latreille (the monocus *Pulex* of Linnéus). In both these a single impregnation will suffice for at least six or seven generations ; in both which, likewise, we have another curious deviation from the common laws of propagation, which is that in the warmer summer months the young are produced viviparously, and in the cooler autumnal months oviparously. It is also very extraordinary that, in the aphis, and particularly in the viviparous broods, the offspring are many of them winged, and many of them without wings or distinction of sex : in this respect making an approach to the working-bees, and still more nearly to the working-ants, known, till of late, by the name of neuters.

For the generative process which takes place in these two last kinds we are almost entirely indebted to the nice and persevering labours of the elder and the younger Hüber ; who have decidedly proved that what have hitherto been called neuters are females with undeveloped female organs, and therefore non-breeders ; but whose organs, at least in the case of bees, are capable of development by a more stimulating or richer honey, with which one of them, selected from the rest, is actually treated for this purpose by the general consent of the hive on the accidental loss of a queen-bee, or common bearer of the whole, and in order to supply her place. It is these alone that are armed with stings ; for the males, or drones, as we commonly call them, are without stings ; they are much larger than the non-breeders or workers, of a darker colour, and make a great buz in flying. They are always less numerous in a hive than the workers, and only serve to insure the impregnation of the few young queens that may be produced in the course of the season,

and are regularly massacred by the stings of the workers in the beginning of the autumn. The impregnation of the queen-bee is produced by a process too curious to be passed over. It was conjectured by Swammerdam that this was effected by an aura seminalis thrown forth from the body of the whole of the drones or males collectively. By other naturalists it has been said, but erroneously, to take place from an intermixture of a male milt or sperm with the eggs or spawn of the queen-bee, as in the case of fishes. M. Hüber, however, has sufficiently proved that the queen-bee for this purpose forms an actual coition, and this never in the hive, but during a tour into the air, which she takes for this purpose, a few days only after her birth, and in the course of which she is sure to meet with some one or other of her numerous seraglio of males. As soon as copulation has been effected she returns to the hive, which is usually in the space of about half an hour, and often bears home with her the full proofs of a connexion in the *ipsa verenda* of the drone; who thus wounded and deprived of his virility by the violence of his embrace, dies almost immediately afterwards. This single impregnation will serve to fecundate all the eggs the queen will lay for two years *at least*; Hüber believes for the whole of her life; but he has had repeated proofs of the former. She begins to lay her eggs, for the bee is unquestionably oviparous, forty-six hours after impregnation, and will commonly lay about three thousand in two months, or, at the rate of fifty eggs daily. For the first eleven months she lays none but the eggs of workers; after which she commences a second laying which consists of drones' eggs alone.

CLASS V.  
I. Machinery of the generative function.

Of the mode of procreation among fishes, in consequence of their living in a different element from our own, we know but little. A few of them, as the squalus, or shark genus, some of the skates, and other cartilaginous fishes, have manifest organs of generation, and unquestionably copulate. The male shark, indeed, is furnished with a peculiar sort of holders for the purpose of main-

Procreation among fishes.

Male organs in the squalus or shark.

CLASS V.  
1. Machinery of the generative function.

Young in some species of this genus produced viviparously. Produced in the same manner in the blenny.

Fishes in general have no external sexual organs or sexual connexion. Ordinary mode of increase.

Spawn, or hard roe. Sperm, milt or soft roe.

Still pairing observable in many kinds.

Illustrated.

Salmon.

taining his grasp upon the female amidst the utmost violence of the waves, and his penis is cartilaginous or horny. The female produces her young by eggs, which, in several species of this genus, are hatched in her own body, so that the young, when cast forth, are viviparous.

The blenny produces its young in the same manner; in most species by spawn or eggs hatched externally, but in one or two viviparously, three or four hundred young being thus brought forth at a time. The blenny, however, and by far the greater number of fishes, have no external organ of generation, and appear to have no sexual connexion. The females, in a particular season of the year, seem merely to throw forth their ova, which we call hard roe or spawn, in immense multitudes, in some shallow part of the water in which they reside, where it may be best exposed to the vivific action of the sun's rays; when the male shortly afterwards passes over the spawn or hard roe, and discharges upon it his sperm, which we call soft roe or milt. These substances are contained in the respective sexes in two bags that unite near the podex, and at spawning time are very much distended. The spawn and milt thus discharged intermix; and, influenced by the vital warmth of the sun, commence a new action, the result of which is a shoal of young fishes of a definite species.

Yet though no actual connexion can be traced among the greater number of the class of fishes, something like pairing is often discernible among many of those that have no visible organs of copulation: for if we watch attentively the motions of such as are kept in ponds, we shall find the sexes in great tumult, and apparently struggling together among the grass or rushes at the brink of the water, about spawning-time; while the male and female salmon, after having ascended a fresh stream to a sufficient height and shallowness for the purpose, are well known to unite in digging a nest or pit in the sand, of about eighteen inches in depth, into which the female casts her spawn, and the male immediately

afterward ejects his milt; when the nest is covered over with fresh sand by a joint exertion of their tails.

The salmon, the sturgeon, and many other marine fishes, seek out a fresh-water stream for this purpose: and their navigations are often of very considerable length before they can satisfy themselves, or obtain a proper gravelly bed. The salmon tribe sometimes make a voyage of several hundred miles, cutting their way against the most rapid currents, leaping over floodgates, or up cataracts of an astonishing height: in their endeavour to surmount which they often fail, and tumble back into the water; and, in some places are, in consequence, caught in baskets placed in the current for this purpose.

## CLASS V.

I. Machinery of the generative function.

Sturgeon.

Dangers encountered at spawning-time.

The power of fecundity in fishes surpasses all calculation, and appears almost incredible. A single herring, if suffered to multiply unmolested, and undiminished for twenty years, would show a progeny greater in bulk than the globe itself. This species, as also the pilchard, and some others of the genus *clupea*, as a proof of their great fertility, migrate annually from the Arctic regions in shoals of such vast extent, that for miles they are seen to darken the surface of the water.

Fecundity of fishes incalculable.

Illustrated in the herring.

The mode of procreating among frogs does not much vary from that of fishes. Early in the spring the male is found upon the back of the female in close contact with her, but there is no discoverable communication, although this contact continues for several days; nor can we trace in the male any external genital organ. After the animals quit each other, the female seeks out some secure and shallow water, in which, like the race of fishes, she deposits her spawn, which consists of small specks held together in a sort of chain or string by a whitish glutinous liquor that envelops them; and over this the male passes and deposits his sperm, which soon constitutes a part of the glutinous matter itself. The result is a fry of minute tadpoles, whose evolution into the very different form and organization of frogs, is one of the most striking curiosities of

Singular procreation among frogs:



CLASS V.  
1. Machinery of the generative function.  
especially the toad of Surinam.

natural history. In the Surinam toad (*rana Pipa*), this process is varied. The female here deposits her eggs or spawn without any attention to order; the male takes up the amorphous mass with his feet and smears it over her back, driving many of the eggs hereby into a variety of cells that open upon it; and afterwards ejecting over them his spermous fluid. These cells are so many nests in which the eggs are hatched into tadpoles, which are perfected and burst their imprisonment in about three months.

Singular position of the organs of generation in many tribes.

Libellula or dragon-fly.

Male spider.

Ascaris vermicularis, or maw-worm.

Snail.

Tænia solium, or tape-worm: as in some plants.

Mamma in quadrupeds.

Teats in the mare inguinal.

Where placed in the horse.

Testes very small, when unemployed, in animals that procreate only once a year.

Illustrated in the sparrow.

But a volume would not suffice to point out all the singularities exhibited by different animals in the economy of procreation. It is worth while, however, to notice how variously some of the organs of generation are situated in many tribes. In the female libellula, or dragon-fly, the vagina is situated on the upper part of the belly near the breast. In the male spider, the generative organ is fixed on the extremity of an antenna. In the female ascaris *vermicularis*, or maw-worm, the young are discharged from a minute punctiform aperture a little below the head, which appears, therefore, to constitute the ascarine vagina. In the snail we find this organ placed near the neck, in the immediate vicinity of the spiracle which serves for its lungs. The tænia *solium*, or tape-worm, throws forth its young from the joints. So some plants bear flowers on the petioles or edges of the leaves instead of on the flower-stalk.

In like manner, while the mammæ in the human kind are placed on the chest, and made a graceful and attractive ornament, in all quadrupeds they are placed backward, and concealed by the thighs. In the mare, the teats, which are two, are inguinal; in the horse, they are singularly placed on the glans penis.

The testes of most animals that possess this organ, and procreate only once a year, are extremely small during the months in which they are not excited. Those of the sparrow, in the winter-season, are scarcely larger than a pin's head, but in the spring are of the size of a hazelnut. In man this organ, before birth, or rather during

the early months of pregnancy, is an abdominal viscus: about the seventh month it descends gradually through the abdominal ring into the scrotum, which it reaches in the eighth month. And if this descent do not take place anterior to birth, it is accomplished with difficulty, and is rarely completed till the seventh or eighth year. Sometimes, indeed, only one testis descends under these circumstances, and occasionally neither.

There is a set of barbarians at the back of the Cape of Good Hope who appear to be very generally monorchid, or possessed of only a single testis; and Linnéus, believing this to be a natural and tribal defect, has made them a distinct variety of the human species. Mr. Barrow has noticed the same singularity: but it is doubtful whether, like the want of a beard among the American savages, this destitution is not owing to a barbarous custom of extirpation in early life. It is generally admitted that the productive power of man is greatly impaired, if not totally lost, by a retention of both testes in the abdomen: yet in the erinaceus or hedgehog genus, and a few other quadrupeds, they never quit the cavity of the abdomen. In the cock, whose penis is dichotomous or two-pronged, they are situated on each side of the back-bone.

It has been made a question among physiologists whether the seminal fluid is secreted by the testes at the moment of the demand, or gradually and imperceptibly in the intervals of copulation, and lodged in the vesiculæ seminales as a reservoir for the generative power to draw upon. The latter is a common opinion. It is, however, opposed, and with very powerful arguments, by Swammerdam and Mr. John Hunter. The secretion found in the vesiculæ seminales is different from that of the testes in the properties of colour and smell; those of the former being yellow and inodorous, those of the latter whitish, and possessing the odour of the orchis-root, or the down of chesnuts. On the dissection of those who have naturally or accidentally been destitute of one testis, the vesicula of the one side has been found filled

## CLASS V.

I. Machinery of the generative function.

Original seat and progress in man.

Whether tribes naturally monorchid? Productive power of man impaired by a retention of the testes in the abdomen. Yet in the erinaceus or hedgehog never quits the abdomen.

Where seated in the cock. Seminal fluid whether secreted by the testes at the moment of demand; or imperceptibly and gradually deposited in the vesiculæ seminales? The latter the common opinion: but opposed by Swammerdam and J. Hunter. On what grounds opposed.

CLASS V.  
1. Machinery of the generative function.

Vesiculæ seminales differ widely in form and size in different animals.  
Hedge-hog.  
Domestic dog.  
Birds.

Hence supposed by J. Hunter to be glands secreting a fluid distinct from semen.

Ovaria: formerly called female testes.  
How connected with the uterus.

Fallopian tube.

with the same fluid, and as largely as that of the other; and consequently the fluid on the vacant side must have been supplied by a secretory action of the vesicula itself. There are no organs of generation that differ so much in their form and comparative size in different animals as these vesicular bags: in the hedge-hog they are twice as large as in man, and in many animals they are utterly wanting. They are so in the dog, which continues for a very long time in a state of copulation, and in birds, whose copulation is momentary. They are, moreover, wanting in most animals whose food is chiefly derived from an animal source, though not in all, as the hedge-hog, to which I have just referred, is an example of the contrary.

Mr. Hunter hence concludes that the vesiculæ seminales are not seminal reservoirs but glands secreting a peculiar mucus, and that the bulb of the urethra is, properly speaking, the receptacle in which the semen is accumulated previous to ejection. Of the actual use of these vesicular bags, he confesses himself to be ignorant, yet imagines that in some way or other they are subservient to the purposes of generation, though not according to the common conjecture.

The ovaria are to the female what the testes are to the male. They were formerly, indeed, called female testes, and furnish, on the part of the female, what is necessary towards the production of a progeny. They are, in fact, two spheroidal flattened bodies, inclosed between the folds of the broad ligaments by which the uterus is suspended. They have no immediate connection with the uterus; but near them the extremity of a tube, which opens on either side into that organ, hangs with loose fimbriæ in the cavity of the abdomen into which it opens at the fimbrial end. This tube is called the Fallopian from the name of its discoverer \*. At the age of puberty, the ovaria acquire their full growth, and continue to weigh

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\* Fallop. *Observ. Anat.* 197.

about a drachm and a half each till menstruation ceases. They contain a peculiar fluid resembling the white of eggs, once supposed to be secreted by the glandular structure of various small bodies imbedded in them, which have been denominated corpora lutea. By some early writers this fluid was contemplated as a female semen, forming a counterpart to the semen of males; but it has since been held, and the tenet is well supported by anatomical facts, to be a secretion of a different kind thrown forth in consequence of the excitement sustained by the separation of one or more of the minute vesicles, which seem to issue from them as their nucleus or matrix, and which are themselves regarded by the same school as the real ovula of subsequent fetuses: to which subject, however, we shall advert presently.

It is singular to contemplate the very powerful influence which the secretion, or even the preparation for secreting the seminal fluid, but still more its ejection, produces over the entire system.

On the perfection, and a certain and entonous degree of distension, of the seminal vessels, apparently producing an absorption of the fluid when at rest, the spirits, the vigour, and the general health of man depend. Hence antecedently to the full elaboration of the sexual system, and the secretion of this fluid, the male has scarcely any distinctive character from the female: the face is fair and beardless, the voice shrill, and the courage doubtful. And whenever, in subsequent life, we find this entonous distension relaxed, we find at the same time languor, debility, and a want of energy both in the corporeal and mental functions. And where the supply is entirely suppressed or cut off by accident, disease, or unnatural mutilation, the whole system is changed, the voice weakened, the beard checked in its growth, and the sternum expanded: so that the male again sinks down into the female character. These changes occur chiefly where the testicles are extirpated before manhood; but they take place also, though in a less degree, afterwards.

In like manner, during the discharge of the seminal

## CLASS V.

I. Machinery of the generative function.

Corpora lutea, what? The secretion of these organs, of what nature?

Vesicles or ovula of the ovaries.

Powerful influence of the seminal fluid on the animal economy. Illustrated.

Effects from its discharge:



CLASS V.  
I. Machinery of the generative function, in the stoutest animals: in the feeblest: in the stoutest plants: in feebler plants.

fluid in sexual commerce, the most vigorous frames of the stoutest animals become exhausted by the pleasurable shock: and the feeble frames of many of the insect tribes are incapable of recovering from the exhaustion, and perish immediately afterwards; the female alone surviving to give maturity to the eggs hereby fecundated. The same effect occurs after the same consumption in plants. The stoutest tree, if superfructified, is impaired for bearing fruit the next year; while the plants of the feeblest structure die as soon as fructification has taken place. Hence, by preventing fructification, we are enabled to prolong their duration; for by taking away the styles and stigmas, the filaments and anthers, and especially by plucking off the entire corols of our garden-flowers, we are able of annuals to make biennials, and of biennials triennials.

Aroma in some animals peculiarly strong in the breeding season, and flesh not eatable. A like effect in fishes. Singular exhaustion in stags.

In many animals, during the season of their amours, the aroma of the seminal fluid is so strong, and at the same time so extensive in its influence as to taint the flesh; and hence the flesh of goats at this period is not eatable. Most fishes are extremely emaciated in both sexes at the same time, and from the same cause, and are equally unfit for the table. Stags, in the rutting season, are so exhausted as to be quite lean and feeble, and to retire into the recesses of the forest in quest of repose and quiet. They are well known to be totally inadequate to the chase; and hence, for the purpose of maintaining a succession of sporting, they are sometimes castrated, in which state they are called heaviers. If the castration be performed while the horns are shed, these never grow again; and, if while the horns are in perfection, they are never shed.

Horns never grow again if castration be performed while they are shed. Peculiar economy in the reindeer.

The male and female reindeer (*cervus Tarandus*) ordinarily cast their horns every year in November. If the male be castrated the horns will not grow after he is nine years old; and the female, instead of dropping her horns as usual in November, retains them, if gravid, till she fawns, which is about the middle of May. In this case the usual stimulus necessary for the operation of exfoli-

ation is transferred to another part of the system. And for the same reason we often find that a broken bone in a pregnant woman will secrete no callus, and, consequently, not unite till after child-birth. In the former case the roots of the horns are affected by sympathy with the general sexual system, of which, indeed, they may be said to form a part, and by their superior size are discriminative of the male sex. In the human race, the strong deep voice characteristic of manhood is rarely acquired, if castration be performed in infancy.

There is no animal, perhaps, but shows some sympathetic action of the system at large, or some remote part of it with the genital organs, when they are in a state of peculiar excitement. The tree-frog (*rana arborea*) has, in the breeding season, a peculiar orbicular pouch attached to its throat; the fore-thumb of the common male toad is at the same season affected with warts: and the females of some of the monkey tribes evince a regular menstruation.

II. The process by which the generative power is able to accomplish its ultimate end, is to the present hour involved in no small degree of mystery; and has given rise to three distinct and highly ingenious hypotheses that have a strong claim upon our attention, and which we shall proceed to notice in the order in which they have appeared.

The first and most ancient of these consists in regarding the fetus in the womb as the joint production of matter afforded in coition by both sexes, that of the male being secreted by the testes, and that of the female by the uterus itself, or some collateral organ, as the ovaria, which last, however, is a name of comparatively modern origin, and derived from a supposed office which was not contemplated among the ancients. To this hypothesis has been given the name of EPIGENESIS.

The seed or matter afforded by the female was regarded by Hippocrates, Aristotle, and Galen, as the menstrual blood or secretion, which they supposed fur-

## CLASS V.

I. Machinery of the generative function.

Explained by analogy.

Association of the general system with the sexual when in a state of excitement. Illustrated in the tree-frog: common male-toad: monkey tribes.

II. Generative process.

Involved in mystery: but has given rise to three popular hypotheses as follow: Fetus produced by the intermixture of a male and female seminal fluid:

forming the theory of epigenesis.

Female generative matter how explained by Hippocrates and

CLASS V.  
II. Generative process.

Aristotle, as distinct from male semen.

How explained by Empedocles and Epicurus. Sex and features how accounted for.

nished the substance and increment of the fetus, while the male semen furnished the living principle: Empedocles, Epicurus, and various other physiologists contending, on the contrary, that the father and mother respectively contributed a seminal fluid that equally co-operated in the generation and growth of the fetus, and stamped it a male or a female, and with features more closely resembling the one or the other according as the orgasm of either was predominant at the time, or accompanied with a more copious discharge. In the words of Lucretius who has elegantly compressed the Epicurean doctrine:

Et muliebre oritur patrio de semine seclum ;  
Maternoque mares existunt corpore cretei.  
Semper enim partus duplici de semine constat :  
Atque, utri simile est magis id, quodquomque creatur,  
Ejus habet plus parte æquâ, quod cernere possis,  
Sive virum suboles, sive est muliebris origo\*.

Sex and features how accounted for by Hippocrates and Aristotle.

Commentary of Lactantius upon Aristotle's opinion.

The distinction of sex, however, was accounted for in a different manner by Hippocrates, who supposed that each of the sexes possesses a strong and a weak seminal fluid; and very ungallantly asserted that the male fetus was formed by an intermixture of the robuster fluids of the two sexes, and the female by that of the more imbecile. Lactantius, in quoting the opinion of Aristotle upon this subject, adds fancifully enough that the right side of the uterus is the proper chamber of the male fetus, and the left of the female: a belief which is still prevalent among the vulgar in many parts of Great Britain. But he adds that if the male, or stronger, semen should by mistake enter the left side of the uterus a male child may still be conceived; yet, inasmuch as it occupies the female department, its voice, its face, and its general complexion will be effeminate. And, on the contrary, if the weaker or female seed should flow into the

\* De Rer. Nat. Lib. iv. 1220.

right side of the uterus, and a female fetus be begotten, the female will exhibit many signs of a masculine character, and be inordinately vigorous and muscular \*.

CLASS V.  
II. Generative process.

The doctrine of epigenesis under one modification or another, continued to be the leading, if not the only hypothesis of the day till the beginning of the sixteenth century, when, in consequence of the more accurate examinations and dissections of Sylvius, Vesalius, Fallopius, and De Graaf, the organs which had hitherto been regarded as female testes, and so denominated, were now declared to be repositories of minute ova, and at length named ovaria by Steno in 1667†. We now therefore enter upon the second of the three hypotheses above alluded to, which derives the fetus from rudiments furnished by the mother alone. This hypothesis was originally advanced by Josephus de Aromatariis, as flowing from these anatomical discoveries, but was chiefly brought into notice by Swammerdam and Harvey, who established the doctrine of *omne ab ovo*. Observing a cluster of about fifteen vesicles in each of the female ovaria, apparently filled with a minute drop of albuminous yellow serum, and perceiving that they appeared to diminish in number in some kind of proportion to the number of parturitions a woman had undergone, it was conceived by these physiologists that such vesicles are inert eggs or ovula, containing miniature embryos of the form to be afterwards evolved, one of which, by the pleasurable shock that darts over the whole body, but in an especial degree through this organ, during the act of copulation, is instantly thrown into a state of vital activity, detached from the common cluster, and in a short time passes into the uterus through the canal of the Fallopian tube which spontaneously enlarges for the purpose; where its miniature germ is gradually unfolded and augmented into a sensible fetus, partaking of the form and figure of the parent stock. The

The one or other of these doctrines popular till the sixteenth century: at which time the ovaria instead of testes, were regarded as depositories of minute ova: and hence named ovaria. Hence another hypothesis which derives the rudiments of the fetus from the mother alone. This hypothesis illustrated.

\* De officio Dei. Cap. XII.

† Elem. Myologiæ Specimen. p. 117.



CLASS V.  
II. Generative process.

Features of the father accounted for by the shock given to the female system during the embrace: it being denied that the male semen could ever reach the uterus or add any thing to the embryo in its evolution. The contrary asserted by Leewenhoeck and Hartsoeker: who contended that it could even enter the Fallopian tube, and actually did so. Extreme and most absurd consequences drawn from both hypotheses: the supporters of the one contending that the father had no immediate connexion with his own child: while those of the other

elementary animalcule, it was farther asserted by Harvey, may be occasionally impressed with a resemblance in its features to the father from the electric impulse given in the genial act to every portion of the solids and fluids of the body, and of consequence to the fluid contained in the ovula themselves: but, reasoning from the length of the vagina in cows and many other animals, and an occasional dissection of the human subject soon after coition, he contended that the male semen never did, or indeed could, enter the uterus, and of course could not add any thing to the embryo in its evolution.

Leewenhoeck and Hartsoeker, however, upon a more accurate anatomy of the uterus immediately after copulation, discovered not only that the projected male semen could enter its cavity, but actually did thus enter, and in some instances, which fell within their notice, had clearly ascended into the Fallopian tubes. And now a new doctrine was started, and one altogether opposite to the theory of Harvey. Upon the principle of the former, the father had no immediate connexion with his own child; he could not bestow upon it a particle of his own matter, and the whole production was the operation of the mother. But, in consequence of this later discovery, it was contended that the entire formation was the work of the father, and that the mother, in her turn, had nothing to do with it: that every particle of the propelled fluid was a true and proper seminum, containing in itself, like the ovulum of the female upon the hypothesis of Harvey, a miniature of all the organs and members of the future fetus, in due time to be gradually evolved and augmented; and that the uterus, and possibly the ovulum, into which some one of these male semina or seminia is almost sure of being protruded in the act of generation, offers nothing more than a nest in which the homunculus or rudimental fetus is deposited for warmth and nutriment. And as the former hypothesis appealed to the natural economy of oviparous animals during the period of incubation, that of worms and tadpoles was appealed to by the latter: and a very considerable degree of life and motion was

supposed to be discovered and proved by the aid of good magnifying glasses in the simple fluid of the male semen insomuch that not less than many millions of these homunculi, or unborn manikins, were pointed out as capering in a diameter not greater than that of the smallest grain of sand, each resembling the tadpole in shape. Delappius, indeed, a celebrated pupil of Leewenhoeck advanced farther; for he not only saw these homuncular tadpoles, but pretended to trace one of them bursting through the tunic by which it was swaddled, and exhibiting two arms, two legs, a human head and heart.

Such was the dream of the popular philosophy on the subject of generation indulged in at the period we are now adverting to, and which continued for upwards of a century. It is truly astonishing to reflect on the universality with which this opinion was accredited, and how decisively every anatomist, and indeed every man who pretended to the smallest portion of medical science, was convinced that his children were no more related, in point of generative power, to his own wife than they were to his neighbour's. It was in vain that Verheyen denied the existence of animalcules in the seminal fluid, and undertook to demonstrate, that the motion supposed to be traced there, was a mere microscopic delusion: it was in vain to adduce the fact of an equal proportion of paternal and maternal features in almost every family in the world, the undeviating intermixture of features in mules, and other hybrid animals, and the casual transfer of maternal impressions to the unborn progeny when suddenly frightened in the earlier months of pregnancy. The theory, as it was triumphantly called, of generation ab animalculo maris, was still confidently maintained; and the mother, it was contended, had nothing to do with the formation of her own offspring, but to give it a warm nest and nourishment.

At length arose the celebrated and indefatigable Buffon, who was not inattentive to the facts before him, nor to the absurdities to which some of them had led. He readily accredited the microscopic motion pointed out by

CLASS V.  
II. Generative process.

affirmed that the whole was the work of the father, and the mother has nothing more to do with it than to furnish a nest.

Appeals to natural history made by both parties. Homunculi semine masculino. Farther extravagances of the same hypothesis. General remarks.

Hypothesis of Buffon forming a re-edition of the hypothesis of epigenesis.

CLASS V.  
II. Genera-  
tive pro-  
cess.

Organic  
molecules  
what?

Leewenhoeck in the floating bodies of male semen, and which Spalanzani has since persuaded himself he has detected not only in this fluid but in various others of an animal origin\*; but instead of admitting them to be animalcules, he regarded them as primordial monads, *molecules organiques*, of a peculiar activity, existing through all nature, and constituting the nutrient elements of living matter: and upon this principle he founded not indeed a new hypothesis, but a new edition of that of epigenesis, with so much accessory, and in his view of the subject, important matter, as very nearly to entitle it to the character of an original plan. Like the speculations to which it succeeded, it soon acquired a very high degree of popularity.

Explained.

All organized beings, and hence plants as well as animals, according to the doctrine of M. de Buffon, contain a vast number of these active molecules in every part of their frames, but especially in the generative organs of both sexes, and the seed-vessels of plants, in which they are more numerous than in any other parts. These organic primordia afford nutrition and growth to the animal and vegetable fabrics; and, as soon as these fabrics are matured, and consequently a smaller proportion of such molecules are requisite, their surplus is secreted and strained off for the formation of vegetable and animal seeds. The existence of ovula, in the female ovaria, impregnated and detached at the time of conception, is by this hypothesis declared to be a chimæra, and their passage into the uterus asserted to be contrary to all observation and fact. The ovaria are once more regarded as female testes receiving, like those of the male, the surplus of the organic molecules of the body, and secreting them, like the latter, for the common purpose of generation. The seminal liquor thus secreted in the male and female frames are, in the act of coition, projected simultaneously into the uterus, and, becoming

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\* Opuscoli de Fisica, Animale, Vegetabile, &c. Vol. II. 8vo. Milan.  
1776

intimately blended there, produce, by a kind of fermentation, the first filaments of the fetus, which grow and expand like the filaments of plants. To render such combination of seminal fluids productive, however, it was contended that their quantities must be duly proportioned, their powers of action definite, and their solidity, tenacity, or rarefaction symphonic; and the fetus, it was added, would be either male or female, as the seminal fluid of the man or woman abounded most with organic molecules, and would resemble either the father or the mother, according to the overbalance of the respective elements contributed by each parent.

CLASS V.  
II. Generative process.

Sex and features how accounted for by Buffon.

It is obvious, from this brief view of the subject, that Buffon in the planning of this hypothesis did nothing more than avail himself of the anatomical facts of Vesalius, De Graaf, and Harvey and the supposed discoveries of Leewenhoeck, to revive in a new form the doctrine of the Greek schools, and especially that of Epicurus. The subject, however, was offered to the world in plausible arguments and captivating eloquence, and had soon the good fortune to meet with powerful and enlightened supporters in Maupertuis, and Needham, who added some improvements, but of no very great importance, to several of M. de Buffon's tenets; while Haller and Bonet strove hard to revive the hypothesis of a female generative power or evolution alone, as first established by Harvey; or rather to erect an edifice, somewhat similar to it, out of the crumbling ruins of the primary building; in doing which they appealed to the phenomena of the vegetable creation with considerable research, and some degree of success. But this revived hypothesis, notwithstanding, has never been very generally followed; and is now almost, if not altogether, relinquished even in Germany.

General remarks.

Buffon supported by Maupertuis and Needham:

opposed by Haller and Bonet, who endeavoured to revive under a new form the hypothesis of female evolution: but with little success.

In like manner, there are several physiologists, who have endeavoured to improve upon the hypothesis of Buffon, of whom it may be sufficient to mention Dr. Darwin and Professor Blumenbach. The alterations, however, are little more than verbal, and consequently of no

Attempted improvements upon Buffon: by Blumenbach and Darwin.



CLASS V.  
II. Genera-  
tive pro-  
cess.

Darwin's  
modifica-  
tion.

Vital germs  
what?

Molecules  
with for-  
mative pro-  
pensities  
what?

Fibrils with  
formative  
appetites  
what?

Blumen-  
bach's mo-  
dification.  
Organized  
and unor-  
ganize l  
matter.

Nisus for-  
mativus  
or bildung-  
strieb what?

Remarks of  
Hunter.

great importance, and chiefly relate to the subordinate doctrine of organic molecules. For the term organic molecules Darwin prefers that of vital germs, which he assorts into two kinds, or rather maintains are thus formed by nature, as being secreted or provided by male or female organs, whether animal or vegetable; for in the philosophy of this writer, the two departments tread closely upon each other. In this subdivision of germs, however, the term molecule is still retained, but limited to the female character or department: the vital germs or particles secreted by the female organs of a bud or flower, or the female organs of an animal being by Dr. Darwin denominated *molecules* with formative propensities; while those secreted from the male organs of either department are called *fibrils* with formative appetencies. To the fibrils he assigns a higher degree of organization than to the molecules. Both, however, we are told, have a propension or an appetency to form or create; as we are told also that "they reciprocally stimulate and embrace each other and instantly coalesce; and may thus popularly be compared to the double affinities of chemistry."

In the view of Professor Blumenbach, matter is divided into two kinds, possessing properties essentially different from each other, these are organized and unorganized: unorganized matter is endued with a creative or formative power throughout every particle; and organized matter with a creative or formative effort, a *nisus formativus*, or *bildungstrieb*\*, as he calls it, a principle in many respects similar to that of gravitation, but endowing every separate organ, as soon as it acquires structure, with a *vita propria*. From the first, he traces the origin of the world in the simple and inorganic state of the mineral kingdom; from the last the rise of vegetables and animals.

It is only necessary to add farther a remark of Mr. John Hunter's, that in plants of all kinds, the seed, pro-

\* Über den Bildungstrieb, 8vo. Götting. 1791.

perly so called, is produced by the female organization, while the male gives nothing more than the principle of arrangement; and that the same operation and principles take place in many orders of animals\*.

In all these attempts to improve upon the older speculations, there is a great deal that cannot but be regarded as philosophical nugæ. The physiological experiments that have been made, and the anatomical facts that have been discovered, since the days of Harvey, and particularly during the last half century, though they leave the doctrine of generation still surrounded with many difficulties, have sufficiently established the following positions:

First that, in all ordinary cases, the male semen enters into the uterus at the time of coition; and that in those cases in which it does not or cannot enter immediately, from the extreme length of the vagina, as in some quadrupeds, or from a greater or less degree of imperforation of the vaginal passage, it is conveyed there soon afterwards in consequence of its proximity of situation.

Secondly, that the uterus itself, worked up at this time to the highest pitch of excitement, secretes also some portion of a peculiar fluid, the female semen of the Epicurean philosophers, with which the male semen combines, and which is probably the basis of the membranes soon afterwards prepared for the fetus.

Thirdly, that the Fallopian tubes at this period become rigid; their fimbriæ embrace the ovaria; and consequently form a direct channel of communication between the ovaria and the uterus; that what were formerly supposed to be vesicles are real ovula; and that one of them, detached by the momentary shock or excitement, bursts from its nucleus or matrix, enters into one of the open mouths of the fimbriæ of the Fallopian tube, and, in consequence, into the tube itself, by which it is conveyed to the uterus; an effect, however, which does not seem to take

CLASS V.  
II. Generative process.

Much philosophical trifling in these speculations. Positions sufficiently established by the facts and discoveries ascertained.

First, male semen communicated to the uterus at first or soon afterwards.

Secondly, the uterus also secretes a peculiar fluid, probably the basis of the subsequent membranes.

Thirdly, Fallopian tubes a medium of communication between the uterus and the ovaries: the supposed vesicles of the latter real ovula, conveyed by this medium to the uterus.

\* Animal Economy, p. 55.

CLASS V.  
II. Genera-  
tive pro-  
cess.

Fourthly,  
the cervix  
of the  
uterus from  
this time  
becomes  
closed, so  
that no  
second fe-  
tation can  
take place.

Formation  
of caduca  
or uterine  
ovum com-  
pleted in  
about a  
week after  
sexual in-  
tercourse.

Fifthly,  
formation  
of other as-  
sociate  
mem-  
branes.

Sixthly, the  
medium of  
connexion  
between the  
child and  
the mother  
the umbi-  
lical chord  
and pla-  
centa.

place during the act of coition, since the ovulum is seldom found, even in the Fallopian tube, till some time afterwards: and that, as soon as the ovulum has thus escaped, the lips of the wound hereby made in the side of the ovary are closed by an external cicatrix, and indented with a small cavity, which forms what is meant by a corpus luteum.

Fourthly, that the cervix of the uterus is, from this time, closed in its canal toward the upper part, so as to prevent a second fetation by the introduction of fresh male semen; while the internal surface of this organ becomes lined with a fine coagulable and plastic lymph, being probably the fluid secreted at the moment of intercourse, assumes a thin membranous form, and has been called tunica caduca or decidua, and constitutes the uterine ovum or egg of the fetus; which important part of the process seems to take place about a week after the time of copulation. In the rabbit Mr. Cruikshank has found it as early as the fourth day.

Fifthly, that, for the better protection and nutrition of the fetus, the walls of the uterine ovum are multiplied; and that hence, while the tunica caduca itself possesses a duplicature, which is called tunica reflexa, there are also two other membranes by which the decidua is lined, denominated chorion and amnion, both which are filled with peculiar fluids; the fluid of the chorion occupying the space between itself and the amnion which it surrounds; and the fluid of the amnion occupying the whole of the interior which is distended with it like a bladder.

Sixthly, that the medium of connexion between the fetus and the mother is the umbilical chord and the placenta into which it is distributed; the former consisting of an artery from each of the fetal iliacs, and a vein running to the fetal liver, twisted spirally and surrounded by a common integument; and the latter consisting of two parts, an uterine or spongy parenchyma, derived from the decidua, and a fetal parenchyma consisting of a great multitude of exquisitely beautiful knotty flocculi that cover the chorion, and constitute not only an organ of

nutriment, but, as was first ingeniously supposed by Sir Edward Hulse, of oxygenation.

Seventhly, that about the third week, or as soon as the uterine ovum is thus prepared for its reception, we can trace the first vestige of the embryo, oval in its shape and resembling a minute bean or kidney, swimming in the fluid of the amnion, and suspended by the umbilical chord which has now shot forth from the placenta. From this reniform substance the general figure pullulates, the limbs are protruded and the face takes its rise.

III. The chief difficulties that have been felt as accompanying these positions, and the general doctrine that flows from them are the following :

First, as to the mode by which the male semen is conveyed to the ovulum in the Fallopian tube.

Secondly, the occasional existence of corpora lutea in the ovaria of virgins, or of those who, from misformation, have been incapable of indulging in sexual commerce.

Thirdly, the occasional detection of a full-sized fetus in the uterus without any placenta, umbilical chord, or mark of an umbilicus.

The first of these difficulties was earliest started, as we have already observed, by Dr. Harvey, who contended that in the case of cows, whose vagina is very long, as well as in various other cases, the semen cannot possibly reach even the uterus ; and that hence there is no reason to suppose it ever reaches it. It was not then known that impregnation commences in the Fallopian tube, and that it must also reach this canal as well ; which, by Harvey would have been received as an objection still more triumphant.

By what means the ejected semen is conveyed into the uterus we do not, indeed, very clearly know even to the present hour ; but that it is so conveyed and even in animals in which the male organ can by no means come in contact with it, has been proved by incontrovertible facts. Mr. John Hunter killed a bitch in the act of copulation, and found that the semen was then existing in the cavity of the uterus, in his opinion carried there per

CLASS V.  
II. Generative process.

Seventhly, the first vestige of the embryo visible about the third week after impregnation, and its shape reniform.

III. Difficulties that are felt to accompany the above positions.

First difficulty, that of the ascent of the male semen to the ovum.

Examined and replied to.



CLASS V.  
 III. Difficulties accompanying the subject of generation.

Proofs that the semen has sometimes ascended even to the ovarium.

Second difficulty.

Examined and replied to.

saltum. Now if it reach the uterus there can be no difficulty in conceiving that it may also reach the Fallopian tubes, which by one end open into the uterus; sucked in, perhaps, as supposed by M. Blumenbach, by the latter organ during the thrilling orgasm of the moment. Leewenhoeck and Hartsoeker, seem, indeed, to have removed the difficulty altogether, by having, in some instances, detected the seminal fluid in the Fallopian tubes themselves. And there seems great reason to believe that it has, occasionally, entered the ovarium, and even produced impregnation in that organ instead of in the uterus, where an obstruction has been offered to the descent of an ovulum into the fimbrial openings of the tube, after its detachment: for we cannot otherwise readily account for the formation of fetuses in the ovarium; facts, however, well known to occur, and of which Mr. Stanley has given a singular instance of late\*, and Dr. Granville a still more extraordinary example, the last fetus at its examination appearing perfect, and four months old†.

The second difficulty is also capable of a plausible answer, but not quite so satisfactory as the preceding:

There can be no doubt that the ovarium is directly concerned in the great business of generation: for it is well known that the operation of spaying or excising the ovaries corresponds in females to that of castration in males. It takes off, not only all power of production, but all desire. And, in a recent volume of the Philosophical Transactions, there is the case of a natural defect of this kind in an adult woman, who, in like manner, had never evinced any inclination for sexual union and had never menstruated: and who on dissection was found, with the deficiency of ovaria, to have the uterus only of the size of an infant's, a very narrow pelvis, and no hair on the pubes‡.

\* Med. Trans. Vol. vi. Art. xvi.

† Phil. Trans. 1820. p. 101.

‡ Vol. for the year 1805. p. 226.

It seems, also, perfectly clear that in conception an ovum does really descend from the ovarium into the uterus within a few days after sexual intercourse has taken place: in proof of which it will be sufficient to quote the following curious historical fact from Sir Everard Home \*, who appears to have traced its path very accurately: "A servant maid, twenty-one years of age, died of an epileptic fit seven days after coition, there being circumstances to prove that she could not have seen her lover after the day here adverted to, nor for many days before. The sexual organs were submitted to dissection: the right ovarium had a small torn orifice upon the most prominent part of its external surface, which led to a cavity filled with coagulated blood, and surrounded by a yellowish organized structure: its inner surface was covered with an exudation of coagulable lymph. A minute spherical body, supposed to be an ovum, was concealed in the cavity of the womb among the long fibres of coagulable lymph which covered its inner surface, and especially towards the cervix. This supposed ovum was submitted to the microscopical powers of M. Bauer, who has made various drawings of it, and who detected in it two projecting points which are considered as the future situations of the heart and brain."

What exact period of time the ovum demands to work its way down the tube into the uterus, has not been very accurately ascertained. That it does not descend at once is admitted on all hands: and there can be no doubt that in different kinds of animals a different period is requisite. Mr. Cruikshank, whose experiments were confined to rabbits, ascertained that in this species the ovum demanded for its journey about forty-eight hours. In the case just alluded to, seven days had elapsed, and consequently a period perfectly sufficient seems to have been given for the purpose, and there can be little doubt that the minute body observed in the cavity of the uterus

CLASS V.  
III. Difficulties accompanying the subject of generation.

Case in exemplification, from Home.

Time and descent of the ovum to the uterus not precisely ascertained.

CLASS V.  
III. Diffi-  
culties ac-  
company-  
ing the sub-  
ject of ge-  
neration.

Whence  
corpora  
lutea in  
virgins, or  
where no  
copulation  
has occur-  
red?

Of the fact  
itself no  
question.

Exempli-  
fied.

Accounted  
for by a  
supposition  
that they  
are pro-  
duced by  
an organic  
impulse  
operating  
on the per-  
sons of fe-  
males of a  
highly  
amorous  
disposition.

The facts  
alluded to  
not quite  
satisfactory  
upon this  
point,  
though of-  
fered by  
Home,  
Blume-  
bach.

was a genuine impregnated ovum that had completed its travels.

But whence comes it to pass, if the copulative percussive, felt through every fibre, is the cause of the detachment of ova or ovula from the ovaria, that examples should be found of a like detachment, and consequently of a formation of corpora lutea in cases where no copulation has ever taken place? Of the fact itself there is no question. "Upon examining," says Sir Everard Home, "the ovaria of several women who had died virgins, and in whom the hymen was too perfect to admit of the possibility of impregnation, there were not only distinct corpora lutea, but also small cavities round the edge of the ovarium, evidently left by ova that had passed out at some former period, *so that this happens during the state of virginity* \*." Professor Blumenbach has met with similar examples; and they have endeavoured to account for it, first, by supposing that the females thus circumstanced must have been of a peculiarly amorous disposition, and at particular times morbidly excited by a venereal orgasm originating in their own persons alone, without any intercourse with the male sex. And next, that a high-wrought excitement of this kind may be sufficient to produce such an effect, and to lead to the first and most important step in the generative process. All this is highly ingenious, but we seem at present to want facts to justify us in offering such an explanation. "We cannot doubt," says Sir Everard Home, "that every time a female quadruped is in heat, one or more ova pass from the ovarium to the uterus, whether she receives the male or not †." And to the same effect Professor Blumenbach, who first launched this opinion in 1718, before the Royal Society ‡ of Göttingen. "The state of the ovaria," says he, "of

\* Phil. Trans. 1817. ut supra.

† Ibid.

‡ Specimen Physiologiæ comparatæ, Comment. Soc. Reg. Scientiæ Göttingens. Vol. ix. 128.

women who have died under strong sexual passion has been found similar to that of rabbits during heat." And in confirmation of this he adds: "in the body of a young woman, eighteen years of age, who had been brought up in a convent, and had every appearance of being a virgin, Valisneri found five or six vesicles *pushing forward* in one ovarium, and the correspondent Fallopian tube redder and longer than usual, as he had frequently observed in animals during heat. Bonet, he adds, gives the history of a young lady who died furiously in love with a man of low rank, and whose ovaria were turgid with vesicles of great size." In neither of these cases, however, do we meet with ovula actually detached, and still less with corpora lutea. Add to which, that not only corpora lutea, but detached ovula, and even imperfect fetation, have at times been found in the ovaries of infants of ten or twelve years of age, who can scarcely be suspected of any such erethism: a very curious instance of which we shall have to quote from Dr. Baillie, under the genus *Præotia* \*.

CLASS V.  
III. Difficulties accompanying the subject of generation.

I am aware that the same explanation has been adopted by M. Cuvier, indeed it is difficult to adopt any other, but direct facts in support of it are as wanting in him as well as in the authorities just referred to. There is an indirect fact appealed to, however, by the last, which is well worth noticing for its curiosity, whatever degree of bearing it may have upon the present question. After observing that a corpus luteum is not positive evidence of impregnation, he adds, nor does the existence of a decidua in the uterus constitute better evidence of the same, since it has sometimes happened that at each period of painful menstruation the excitement of the uterine vessels has produced a perfect decidua not to be distinguished from that belonging to an ovum. The present author has never met with a case of this kind, but of the fact itself there seems no doubt: Morgagni has given one striking

and Cuvier.

Indirect support from another curious fact.

\* Class v. Ord. II. Gen. II. Spec. II. of the present volume.



CLASS V.  
III. Difficulties accompanying the subject of generation.  
Origin of this membrane explained.

Does not afford much support to the common conjecture.

Third difficulty:

growth and support of fetus where no placenta or umbilical chord.

What is the substitute on such occasions?

This singular fact triumphantly appealed to by the advocates for the doctrine of epigenesis, as overthrowing the doctrine of evolution.

The fact itself flatly denied by some of their opponents.

Difficulty still hanging which ever party may be correct.

instance of it in his day \*, and Mr. Stanley another in our own †. To explain the origin of such a membrane under such circumstances is by no means difficult, as it follows upon the common principle by which other membranous or membrane-like tunics are produced in other hollow organs in a state of peculiar irritation, of which some curious examples have already been offered under *DIARRHŒA TUBULARIS* ‡. The peculiar character of the membrane must necessarily be governed by the character of the organ in which it is formed. Upon the whole, it does not seem to afford much support to the argument in whose favour it is appealed to, and the subject requires further investigation.

The third difficulty attendant upon the common doctrine of the day, which supposes the fetus to hold its entire communication with, and to derive its blood, nutriment, and oxygen from the mother by means of the placenta and umbilical chord, is founded upon the occasional instances of fetuses of large and even full growth being found in the womb, and even brought forth at the proper period without any placenta, or at least of any utility, without any umbilical chord, or even the trace of an umbilicus. Admitting the course just glanced at to be the ordinary provision of Nature, what is the substitute she employs on these occasions? the means by which the bereft fetus is supplied with air and nourishment?

The advocates of the doctrine of epigenesis, as new modelled by the hands of Buffon and Darwin, triumphantly appeal to these curious deviations from the established order of nature, as effecting a direct overthrow of the doctrine of evolution by an impregnated ovum: while the supporters of the latter doctrine have too generally cut the question short by a flat denial of such monstrous aberrations.

There is little of the true spirit of philosophy in either

\* De Sed. et Caus. Morb. Ep.

† Med. Trans. Vol. vi. Art. xvi.

‡ Vol. i. p. 239.

conduct. Admitting the existence of such cases, they just as much cripple the one doctrine as the other, for, granting the explanation which is usually offered by the former, the ordinary machinery of a placenta and an umbilical chord, become immediately a work of superelevation: a bulky and complicated piece of furniture to which no important use can be assigned, and which the overloaded uterus might be well rid of.

But, on the contrary, to deny the existence of well established and accumulated facts merely because we cannot bend them to our own speculation, is still weaker and more reprehensible. The kangaroo, opossum, and wombat, all breed their young without either placenta or navel-string. The embryos are inclosed in one or more membranes, which are not attached to the coats of the uterus, and are supplied with nourishment, and apparently with air from a gelatinous matter by which they are surrounded. Hoffman gives us the case of a fetus born in full health and vigour with the funis sphacelated and divided into two parts\*. Vander Wiel gives the history of a living child exhibited without any umbilicus, as a public spectacle†; and in a foreign collection of literary curiosities is the case of a hare which was found, on being opened, to contain three leverets, two of them without a placenta or umbilical vessels: and the other with both‡. Ploucquet has collected a list of several other instances in his *Initia* §: but, perhaps, the most striking example on record is one which occurred to the present author in December 1791, an account of which he gave to the public in 1795 ||. The labour was natural, the child, scarcely less than of the ordinary size, was born alive, cried feebly once or twice after birth, and died in

CLASS V.  
III. Difficulties accompanying the subject of generation.

Hence the first party object unphilosophically. And still more unphilosophical a denial of the second, merely because no explanation of the occurrence.

Illustrations of the fact.

Striking case that occurred to the present author.

\* Op. de Pinguetudine.

† Observ. Cent. post.

‡ Commerc. Literar. Norimberg.

§ *Initia Bibliothecæ, Medico-Pract. et Chirurg. Tom. III. p. 554. 4to. Tubing, 1794.*

|| Case of Preter-natural Fetation, with observations: read before the Medical Society of London, Oct. 20, 1794.

CLASS V.  
III. Difficulties accompanying the subject of generation.

about ten minutes. The organization, as well external as internal, was imperfect in many parts. There was no sexual character whatever, neither penis nor pudendum, nor any interior organ of generation: there was no anus or rectum, no funis, no umbilicus; the minutest investigation could not discover the least trace of any. With the use of a little force, a small, shrivelled placenta, or rather the rudiment of a placenta followed soon after the birth of the child, without a funis or umbilical vessels of any kind, or any other appendage by which it appeared to have been attached to the child. No hemorrhage or even discoloration followed its removal from the uterus. In a quarter of an hour afterwards a second living child was protruded into the vagina and delivered with ease, being a perfect boy attached to its proper placenta by a proper funis. The author dissected the first of these shortly after its birth in the presence of two medical friends of distinguished reputation, Dr. Drake of Hadleigh, and Mr. Anderson of Sudbury, both of whom are still able to vouch for the correctness of this statement. On the present occasion, however, it is not necessary to follow up the amorphous appearances any further, as they are already before the public, except to state that the stomach, which was natural, was half filled with a liquid resembling that of the amnios.

Subject formerly discussed with much ability and at great length, in the Edinburgh Medical Essays.

Supported by Gibson.

This subject has been brought forward, and will be found ably discussed in the earlier volumes of the Edinburgh Medical Essays, by Professor Monro, and Mr. Gibson \*. The latter giving full credit to the few histories of the case then before the world, endeavours very ingeniously to account for the nutriment of the fetus by the liquor amnii, which he conjectures to be the ordinary source of supply and not the placenta. The chief arguments are that the embryo is at all time found at an earlier period in the uterus than in the placenta itself;

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\* Vol. i. Art. XIII. Vol. II. Art. IX, X, XI. See also Dr. Fleming's paper. Phil. Trans. Vol. XLIX. 1775-6, p. 254.

which does not appear to be perfected till two or three months after conception; and consequently that the embryo must, thus far, at least, be supported from some other source than the placenta; and if thus far, why not through the whole term of parturition? That extra-uterine fetuses have no placenta, and yet obtain the means of growth and evolution from the surrounding parts. That the liquor amnii is analogous in its appearance to the albumen of a hen's egg, which forms the proper nourishment of the young chick: that it is found in the stomach and mouths of viviparous animals when first born; and that it diminishes in its volume in proportion to the growth of the fetus.

CLASS V.  
III. Difficulties accompanying the subject of generation.

To these arguments it was replied by Professor Monro that we have no satisfactory proof that the liquor amnii is a nutritive fluid at all, and that in the case of amorphous fetuses produced without the vestige of a mouth or of any other kind of passage leading to the stomach, it cannot possibly be of any such use: that if the office of the placenta be not that of affording food to the embryo, it become those who maintain the contrary to determine what other office can be allotted to it; and that till this is satisfactorily done, it is more consistent with reason to doubt the few and unsatisfactory cases at that time brought forward, than to perplex ourselves with facts directly contradictory of each other.

Opposed by Monro.

For the full scope of the argument the reader must turn to the Edinburgh Medical Essays themselves, or for a close summary to the present author's observations appended to his own case. It must be admitted that the instances adverted to in the course of the discussion are but few, and most of them stamped with something unsatisfactory. Others, however, might have been advanced even at that time on authorities that would have settled the matter of fact at once, how much soever they might have confounded all explanation. But after the history just given, and the references to other cases by which it may be confirmed, this is not necessary on the present occasion.



## CLASS V.

III. Difficulties accompanying the subject of generation. In this discussion the doctrine of aeration not adverted to.

Other difficulties of a more general kind but quite as inexplicable.

Extra-uterine fetuses developed without placenta or amnios.

Amorphous births of various kinds equally unaccountable.

Transmission of talents, defects, or other peculiarities from generation to generation.

It is singular that the subject of aeration, which forms another difficulty in discussing the question, is not dwelt upon on either side, notwithstanding the ingenious conjecture of Sir Edward Hulse, that the placenta might be an organ of respiration as well as of nutrition, had at this time been before the public for nearly half a century: and it shows us how slow the best founded theories not unfrequently are in obtaining the meed of public assent to which they are entitled from the first.

These, however, are only a few of the peculiar difficulties that still accompany the subject of generation, to whatever doctrine we attach ourselves. There are others that are more general, but equally inexplicable. The whole range of extra-uterine fetuses is of this character; often formed and nourished and developed without either placenta or an amnios, and yet sometimes advancing, even in the remote cavity of the ovarium, and perfect in every organ, to the age of, at least, four months, of which we have already offered an example. A great part of the range of amorphous births defy equally all mental solution; particularly the production of monsters without heads or hearts, some of whom have lived for several days after birth\*; of others consisting of a head alone, wholly destitute of a trunk, and yet possessing a full developement, a specimen of which was lately in the possession of Dr. Elfes, of Neuss, on the Rhine†: and of others again, the whole of whose abdominal and thoracic viscera has been found transposed‡.

Nor less inexplicable is the generative power of transmitting peculiarities of talents, of form, or of defects in a long line of hereditary descent, and occasionally of suspending the peculiarity through a link or two, or an individual or two, with an apparent capriciousness, and then of exhibiting them once more in full vigour. The

\* See for examples and authorities the author's volume of Nosology, p. 538.

† Hufeland, Journal der Practischen Heilkunde. Apr. 1816.

‡ Sampson, Phil. Trans. 1674.

vast influence which this recondite, but active power possesses, as well over the mind and the body, cannot, at all times, escape the notice of the most inattentive. Not only are wit, beauty, and genius propagable in this manner, but dulness, madness, and deformity of every kind.

CLASS V.  
III. Difficulties accompanying the subject of generation.

Even where accident, or a cause we cannot discern, has produced a preternatural conformation or singularity in a particular organ, it is astonishing to behold how readily it is often copied by the generative power, and how tenaciously it adheres to the future lineage. A preternatural defect in the hand or foot, has, in many cases, been so common to the succeeding members of a family, as to lay a foundation in every age and country for the family name, as in that of Varro, Valgius, Flaccus and Plautus of Rome. Seleucus had the mark of an anchor on his thigh, and is said to have transmitted it to his posterity: and supernumerary fingers and toes have descended in a direct line for many generations in various countries. Hence hornless sheep and hornless oxen produce an equally hornless offspring, and the broad-tailed Asiatic sheep yields a progeny with a tail equally monstrous, often of not less than half a hundred pounds weight. And hence, too, those enormous prominences in the hinder parts of one or two of the nations at the back of the Cape of Good Hope, of which examples have been furnished to us in our own island.

Further illustrated.

How, are we moreover to account for that fearful host of diseases, gout, consumption, scrophula, leprosy and madness, which, originating, perhaps, in the first sufferer accidentally, are propagated so deeply and so extensively that it is difficult to meet with a family whose blood is totally free from all hereditary taint? By what means this predisposition may be best resisted it is not easy to determine. But as there can be no question that intermarriages among the collateral branches of the same family tend more than any thing else to fix and multiply and aggravate it, there is reason to believe that unions between total strangers, and, perhaps, inhabitants of different countries, form the surest antidote. For ad-

Transmission of diseases.

By what means such transmissions may be best opposed.

CLASS V.  
III. Difficulties accompanying the subject of generation.

Wisdom of the restraints of divine and human laws on intermarriages between near relations.  
Quaint remedy proposed by Burton.

Severe law formerly in existence in Scotland.

mitting that such strangers to each other may be tainted on either side with some morbid predisposition peculiar to their respective lineages, each must lose something of its influence by the mixture of a new soil; and we are not without analogies to render it probable that in their mutual encounter the one may even destroy the other by a specific power. And, hence, nothing can be wiser, on physical as well as on moral grounds, than the restraints which divine and human laws have concurred in laying on marriages between relations: and though there is something quaint and extravagant, there is something sound at the bottom, in the following remark of the sententious Burton upon this subject: "And surely," says he, "I think it has been ordered by God's especial providence, that, in all ages, there should be, once in six hundred years, a transmigration of nations to amend and purify their blood, as we alter seed upon our land; and that there should be, as it were, an inundation of those northern Goths and Vandals and many such like people, which came out of that continent of Scandia and Sarmatia, as some suppose, and over-ran, as a deluge, most part of Europe and Africa, to alter, for our good, our complexions that were much defaced with hereditary infirmities, which by our lust and intemperance we had contracted \*." Boethius informs us of a different and still severer mode of discipline at one time established in Scotland for the same purpose, but which, however successful, would make, I am afraid, sad havoc in our own day, were it ever to be carried into execution. "If any one," says he, "were visited with the falling sickness, madness, gout, leprosy, or any such dangerous disease, which was likely to be propagated from father to son, he was instantly castrated; if it were a woman she was debarred all intercourse with men; and if she were found pregnant with such complaint upon her, she and her unborn child were buried alive †."

\* Anatomy of Melancholy, Vol. i. Part i. Sect. ii. p. 89, 8vo.

† De Veterum Scotorum Moribus, Lib. i.

## CLASS V.

## GENETICA.

## ORDER I.

## CENOTICA.

*Diseases affecting the Fluids.*

MORBID DISCHARGES; OR EXCESS, DEFICIENCY OR IR-  
REGULARITY OF SUCH AS ARE NATURAL.

THIS order, the name of which is derived from Galen, and has been explained already, is designed to include a considerable number of diseases which have hitherto been scattered over every part of a nosological classification, but which are related to each other as being morbid discharges dependent upon a morbid condition of one or more of the sexual organs. The genera are five, and they may be thus expressed:

CLASS V.  
ORDER I.  
Scope of  
the order.

- |                   |                  |
|-------------------|------------------|
| I. PARAMENIA.     | MISMENSTRUATION. |
| II. LEUCORRHŒA.   | WHITES.          |
| III. BLENNORRHŒA. | GONORRHŒA.       |
| IV. SPERMORRHŒA.  | SEMINAL FLUX.    |
| V. GALACTIA.      | MISLACTATION.    |



## GENUS I.

## PARAMENIA.

**Mis-menstruation.**

## MORBID EVACUATION OR DEFICIENCY OF THE CATAMENIAL FLUX.

GEN. I.  
Origin of  
generic  
term.

Catamenia  
incorrectly  
regarded  
as blood:  
since it has  
hardly any  
property in  
common  
with it.

How dis-  
tinguished  
by J.  
Hunter.

By Cruik-  
shank.

Further  
illustrated.

PARAMENIA is a Greek term derived from *παρὰ* "male" and *μην* "mensis." The genus is here limited to such diseases as relate to the menstrual flux, or the vessels from which it issues. This fluid is incorrectly regarded as blood, by Cullen, Leake, Richerand, and other physiologists: for, in truth, it has hardly any common property with blood, except that of being a liquid of a red colour. It is chiefly distinguished by its not being coagulable; and hence, when coagula are found in it, as in laborious and profuse menstruation, serum or blood is intermixed with it, and extruded either from atonic relaxation or entonic action of the menstrual vessels. "It is," observes Mr. John Hunter, "neither similar to blood taken from a vein of the same person, nor to that which is extravasated by accident in any other part of the body; but is a species of blood, changed, separated, or thrown off from the common mass by an action of the vessels of the uterus similar to that of secretion; by which action the blood loses the principle of coagulation, and, I suppose, life." Mr. Cruikshank supposes it to be thrown forth from the mouths of the exhaling arteries of the uterus, enlarged periodically for this purpose; and his view of the subject seems to be confirmed by a singular case of prolapse, both of the uterus and vagina,

given by Mr. Hill, of Dumfries, in the Edinburgh Medical Commentaries. In this case, the *os tinæ* appeared like a nipple projecting below the retroverted vagina, which assumed the form of a bag. The patient, at times, laboured under leucorrhœa: but it was observed that, when she menstruated, the discharge flowed entirely from the projecting nipple of the prolapse; while the leucorrhœa proceeded from the surrounding bag alone\*.

GEN. I.  
Paramenia.  
Mismen-  
struation.

As this distinction has not been sufficiently attended to either by nosologists or physiologists, many of the diseases occurring in the present arrangement under paramenia, have been placed by other writers under a genus named menorrhagia, which, properly speaking, should import hemorrhage (a morbid flow of *blood alone*) from the menstrual vessels. And we have here, therefore, not only a wrong doctrine but the formation of an improper genus; for menorrhagia or uterine hemorrhage is, correctly speaking, only a species of the genus HÆMORRHAGIA, and will be so found in the present system, in which it occurs in Class III. Order IV. This remark applies directly to Sauvages; and quite as much so to Cullen, who, in his attempt to simplify, has carried the confusion even further than Sauvages. Few diseases, perhaps, of the uterus, or uterine passage can be more distinct from each other than vicarious menstruation, lochial discharge, and sanious ichor; yet all these, with several others equally unallied, are arranged by Sauvages under the genus menorrhagia, though not one of them belongs to it. While Cullen not only copies nearly the whole of these maladies with the names Sauvages has assigned them, but adds to the generic list leucorrhœa or whites, abortion, and the mucous fluid, secreted in the beginning of labour from the glandulæ Nabothi at the orifice of the womb, and hence vulgarly denominated its *show*, or appearance.

Nosological  
confusion  
from not  
attending  
to this dis-  
tinction;

particu-  
larly in  
Sauvages  
and Cullen.

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\* Vol. IV. p. 91.

GEN. I.  
Paramenia.  
Mismen-  
struation.  
Specific  
divisions of  
morbid  
menstrua-  
tion.

Menstruation may be diseased from obstruction, severe pain in its secretion, excess of discharge, transfer to some other organ, or cessation: thus offering us the five following species, accompanied with distinct symptoms:

- |    |                   |                                    |
|----|-------------------|------------------------------------|
| 1. | PARAMENIA OBSTRU- | OBSTRUCTED MENSTRUATION.           |
|    | TIONIS.           |                                    |
| 2. | ———— DIFFICILIS.  | LABORIOUS MENSTRUATION.            |
| 3. | ———— SUPERFLUA.   | EXCESSIVE MENSTRUATION.            |
| 4. | ———— ERRORIS.     | VICARIOUS MENSTRUATION.            |
| 5. | ———— CESSATIONIS. | IRREGULAR CESSATION OF THE MENSES. |

## SPECIES I.

### PARAMENIA OBSTRUCTIONIS.

#### Obstructed Menstruation.

CATAMENIAL SECRETION OBSTRUCTED IN ITS COURSE;  
SENSE OF OPPRESSION; LANGUOR; DYSPEPSY. &c.

GEN. I.  
SPEC. I.

THIS species by many writers called menostatio, appears under the two following varieties:—

α Emansio.

Retention of the  
menses.

The secretion obstructed on its accession or first appearance. The feet and ancles edematous at night; the eyes and face in the morning.

# 6 Suppressio.

Suppression of the menses.

The secretion obstructed in its regular periods of recurrence. Head-ache, dyspnoea, palpitation of the heart.

GEN. I.  
SPEC. I.  
Paramenia  
obstructionis.  
Obstructed menstruation.

In order to explain the FIRST of these VARIETIES, or RETENTION OF THE MENSES, it is necessary to observe, that when the growth of the animal frame is completed, or nearly so, the quantity of blood and sensorial power which have hitherto been employed in providing for such growth, constitutes an excess, and must produce plethora by being diffused generally, or congestion by being accumulated locally. Professor Monro contended for the former effect; Dr. Cullen, with apparently more reason, for the latter. And this last turn it seems to take for the wisest of purposes; I mean in order to prepare for a future race by perfecting that system of organs which is immediately concerned in the process of generation; and which, during the general growth of the body, has remained dormant and inert, to be developed and perfected alone when every other part of the frame has made a considerable advance towards maturity, and there is, so to speak, more leisure and materials for so important a work. We shall have occasion to touch upon this subject more at large when we come to treat of the genus CHLOROSIS: for the present it will be sufficient to observe, that this accumulation of nervous and sanguineous fluid seems first to show itself among men in the testes and among women in the ovaria, and that from the ovaria it spreads to all those organs that are connected with them either by sympathy or unity of intention, chiefly to the uterus and the mammæ; exciting in the uterus a new action and secretion, which secretion, in order to relieve the organ from the congestion it is hereby undergoing, is thrown off periodically, and by lunar intervals in the form of a blood-like discharge, although when minutely examined, the discharge, as already stated, is found to consist not of genuine blood, but of a fluid possessing peculiar properties. These proper-

α P. obstructionis  
Emansio.  
Retention of the menses.  
Physiology.

Sexual organization when perfected, by what means:

and with what result.

Menstrual discharge.



GEN. I.  
SPEC. I.  
a P. ob-  
structionis  
Emansio.  
Retention  
of the  
menses.  
Its charac-  
ter.  
Erroneous  
view of  
Cullen.

ties we have already enlarged upon, and have shown in what they differ from those of proper blood: and it is upon this point that the physiology of Dr. Cullen is strikingly erroneous, for not only in his First Lines, but long afterwards in his Materia Medica, he regards the discharge as pure blood, and, consequently, the economy of menstruation as a periodical hemorrhage. "I suppose," says he, "that in consequence of the gradual evolution of the system, at a certain period of life, the vessels of the uterus are dilated and filled: and that by this congestion these vessels are stimulated to a stronger action by which their extremities are forced open and pour out blood. According to this idea it will appear that, I suppose, the menstrual discharge to be upon the footing of an active hemorrhagy, which, by the laws of economy, is disposed to return after a certain interval \*."

Sympathe-  
tic affection  
with the  
uterus at  
this time  
often mani-  
fested in re-  
mote parts.

From the sympathy prevailing between the uterus and most other organs of the system, we meet not unfrequently with some concomitant affection in various remote parts; as an appearance of spots on the hands or forehead antecedently to the efflux†; or, which is more common, a peculiar sensation or emotion in the breasts‡.

Catamenia  
why thrown  
off monthly  
rather than  
at other  
periods not  
known.  
Still a proof  
of design  
obvious:  
and a habit  
established  
by repeti-  
tion.

We cannot explain the reason why this fluid should be thrown off once a month or by lunar periods, rather than after intervals of any other duration. But the same remark might have been made if the periods had been of any other kind: and will equally apply to the recurrence of intermittent fevers. It is enough that we trace in this action the marks of design and regularity: and after the establishment of a habit by a few repetitions, there is no difficulty in accounting for the intervals being of equal length.

Period of  
first appear-  
ance vari-  
able,

The time in which the secretion, and consequently the discharge, commences, varies from many circumstances,

\* Mat. Med. Vol. II. p. 587. 4to.

† Salmuth, Cent. III. Obs. 18.

‡ Act. Nat. Cur. Vol. III. App. p. 168.

chiefly, however, from those of climate, and of peculiarity of constitution. In warm climates menstruation appears often as early as at eight or nine years of age—for here the general growth of the body advances more rapidly than in colder quarters, and the atmosphere is more stimulant. In temperate climates it is usually postponed till the thirteenth or fourteenth year, and in the arctic regions till the nineteenth or twentieth.

In all climates, however, when the constitution has acquired the age in which it is prepared for the discharge, various causes, observes Dr. Gulbrand, may accelerate its appearance. Among these we may mention any preternatural degree of heat or fever, or any other stimulus that quickens the circulation. Mauriceau relates a case in which it was brought on suddenly by an attack of a tertian intermittent: and in like manner anger or any other violent emotion of the mind, has been found to produce it as abruptly. The depressing passions, as fear and severe grief, conduce to the same end though in a different way: for here there is rather uterine congestion than increased impetus, in consequence of the spastic chill of the small vessels on the surface, which lessens their diameter. Inordinate exercise, or a high temperature of the atmosphere, has in like manner a tendency to hurry on the menstrual tide; and hence its appearing so early in tropical regions. Dr. Gulbrand, indeed, conceives that even an increase in the elasticity or weight of the atmosphere is sufficient to produce a like effect, and refers to a curious fact in proof of this. In an hospital, to which he was one of the physicians, he tells us that a very considerable number of the female patients were suddenly seized with catamenia; which was the more remarkable because several of these had, for a considerable time laboured under a suppression of that discharge, and had been taking emmenagogues to no purpose; while others had only been free from their regular returns for a few days. On inquiring into the cause, the only one which could be ascertained was a very great augmentation in the weight or pressure of the atmos-

GEN. I.  
SPEC. I.

α P. obstructionis  
Emansio.  
Retention of the  
menses.

from eight  
or nine in  
hot climates, to  
thirteen or  
fourteen in  
temperate,  
and nineteen  
or twenty in  
arctic regions.

Generally  
accelerated  
by accidents.

Sometimes  
by a difference in the  
electricity  
or weight  
of the atmosphere.

GEN. I.  
SPEC. I.  
α P. ob-  
structionis  
Emansio.  
Retention  
of the  
menses.  
Hence the  
disease  
sometimes  
said to be  
epidemic.

phere, the mercury in the barometer having attained a height at which it had never been observed at Copenhagen before : though he does not state the point it had actually reached \*. It is possible that other general causes may sometimes operate to a like extent ; and hence this disease is said, by Stoll and other writers, to be occasionally epidemic †.

Still much depends upon the idiosyncrasy : some girls are of a more rapid growth than others of the same climate ; and in some there is a peculiar sexual precocity or prematurity of orgasm that hurries on the discharge before the general growth of the body would lead us to expect it, of which Pecklin gives an example in a girl of seven years of age who, in the intervals, laboured under a leucorrhœa ‡. And hence chiefly we are able to account for those very early and marvellous stories of pregnancy in girls of not more than nine years old, which if not well authenticated, and from different and unconnected quarters, might justify a very high degree of scepticism §.

The efflux continues from two to eight or ten days ; and the quantity thrown forth varies from four to ten ounces in different individuals : the monthly return running on till the fortieth or fiftieth year, and sometimes, as we shall have occasion to observe hereafter, to a much later period of life.

It is not always, however, that a retention of the menses to a much later date than sixteen, or even twenty years of age constitutes disease : for sometimes it never takes place at all, as where the ovaries are absent or perhaps imperfect ; or where, instead of precocity in the genital system, there is a constitutional tardiness and want of stimulus ; under which circumstances it appeared for the first time, according to Holdefreund, in one instance

Much de-  
pends on  
the idiosyn-  
crasy under  
which preg-  
nancy is re-  
ported to  
have oc-  
curred at  
nine years  
of age.  
Duration  
of the dis-  
charge.  
Quantity  
secreted.  
Ultimate  
term.

Retention  
not always  
a disease.  
Sometimes  
prevented  
by structu-  
ral defect.  
Sometimes  
by consti-  
tutional  
tardiness.

\* De Sanguifluxu Uterino, 8vo. Hafn.

† Rat. Med. P. II. p. 48.

Samml. Med. Wahrnehm. ix. B. p. 401.

‡ Lib. I. Obs. 24.

§ Haller, (Gottl. Eman.) Blumenbach. Bibl. I. p. 558.

Schmid, Art. Helvet. iv. p. 167.

Eph. Nat. Cur. Dec. III. An. II. Obs. 172.

at the age of seventy \*. It is only, therefore, when symptoms take place indicating a disordered state of some part or other of the body, and which experience teaches us is apt to arise upon a retention of the menstrual flux, that we can regard such retention as a disease.

These symptoms, as already stated in the definition of the disorder, consist chiefly in a general sense of oppression, languor, and dyspepsy. The languor extends over the whole system, and affects the mind as well as the body: and hence, while the appetite is feeble and capricious, and shows a desire for the most unaccountable and innutrient substances, the mind is capricious and variable, often pleased with trifles, and incapable of fixing on any serious pursuit. The heat of the system is diffused irregularly and is almost always below the point of health: there is, consequently, great general inactivity and particularly in the small vessels and extreme parts of the body. The pulse is quick but low, the breathing attended with labour, the sleep disturbed, the face pale, the feet cold, the nostrils dry, the intestines irregularly confined, and the urine colourless. There is also, sometimes an irritable and distressing cough; and the patient is thought to be on the verge of a decline, or perhaps to be running rapidly through its stages.

A decline, however, does not follow, nor is the disease found fatal, although it should continue, as it has done not unfrequently, for many years: for if the proper discharge do not take place, the constitution will often in some degree accommodate itself to the morbid circumstances that press upon it, and many of the symptoms will become slighter or altogether disappear. Most commonly, however, when the patient is supposed to be at the worst, probably from the increased irritation of the system peculiarly directed to the defaulting organs, a little mucous or serous discharge, with a slight show of colour is the harbinger of a beneficial change, and is

GEN. I.  
SPEC. I.  
a P. obstructionis:  
Emansio.  
Retention  
of the  
menses.  
Has occurred for the first time at seventy.  
Hence retention only a disease when the body is disordered in consequence hereof.  
Description of symptoms when the system suffers.

Patient sometimes thought to be in a decline.

Yet decline does not follow though the disease continue for many years.  
System sometimes accommodates itself to the morbid condition.  
Disease sometimes ceases gradually when supposed to be at the worst.

\* Erzählungen, N. 4.



GEN. I.  
SPEC. I.  
α P. ob-  
structionis  
Emansio.  
Retention  
of the  
menses.

Manifestly  
a disease of  
debility,  
which is  
generally  
the primary  
cause.

ε P. ob-  
structionis  
Suppressio.  
Suppres-  
sion of the  
menses.  
Cause  
mostly that  
of the pre-  
ceding  
variety.

May exist  
equally in  
a robust  
and deli-  
cate frame.

Symptoms  
necessarily  
different  
from those  
of the pre-  
ceding  
variety, and  
why?  
Yet not  
essentially  
different in  
weakly  
habits.

soon succeeded by the proper discharge itself: though it often happens that the efflux is at first not very regular either as to time or quantity: but this is an evil which generally wears away by degrees, and is diminished with every recurrent tide.

All the symptoms indicate that retained menstruation is a disease of debility; and there can be little doubt that debility is its primary cause—a want of energy in the secernent vessels of the uterus that prevents them from fulfilling their office, till the increase of irritability from the increase of general weakness, at length produces a sufficient degree of stimulus, and thus momentarily supplies the place of strength. The system at large suffers evidently from sympathy.

Yet menostation may take place from a SUPPRESSION OF THE MENSES after they have become habitual, as well as from their retention in early life, which constitutes the SECOND VARIETY of the disease.

The causes of this form are for the most part those of the preceding, and consist in a torpitude of the extreme or secernent vessels of the uterus produced by anxiety of mind, cold, or suddenly suppressed perspiration; falls, especially when accompanied with terror, or a general inertness and flaccidity of the system, and more particularly of the ovaria. Hence the disease may exist equally in a robust and plethoric habit and in the midst of want and misery. In the last case, however, it is usually a result of weakness alone; and on this account it is sometimes found as a sequel upon protracted fevers.

As this modification of the disease occurs after a habit has been established in the constitution, its symptoms differ in some degree from those we have just contemplated. And as it occurs also both in a state of entony and atony, the symptoms must likewise differ according to the state of the constitution at the time. If, however, the frame be at the time peculiarly weak and delicate, the signs will not essentially vary from those of the first variety, only that there will be a greater tendency to head-ache, and palpitation of the heart.

If the habit be plethoric, and, more particularly, if the cause of suppression take place just at the period of menstruation, or during its efflux, a feverish heat and aridity of the skin usually make their appearance, the face is flushed and the eyes red, the head is oppressed and often aches, with distressing pains down the back, occasionally relieved by a hemorrhage from the nose.

As the principle which should guide us in the mode of treating both these varieties, will also extend to the ensuing species, it will be most convenient to defer the consideration of it till that species has passed in review before us. We shall then be able to see how far a common process may apply, and to contrast the few points in which it will be necessary to institute a difference.

GEN. I.  
SPEC. I.  
♂ P. ob-  
structionis  
Suppressio.  
Suppression of the  
menses.  
Symptoms  
in an en-  
tonic habit.  
Mode of  
treatment  
postponed  
to the close  
of the ensu-  
ing species,  
and why?

---

## SPECIES II.

### PARAMENIA DIFFICILIS.

#### *Laborious Menstruation.*

CATAMENIA ACCOMPANIED WITH GREAT LOCAL PAIN AND  
ESPECIALLY IN THE LOINS; PART OF THE FLUID COA-  
GULABLE.

In the preceding species the regular efflux is altogether prevented, as we have already observed, by a torpitude of the discerning vessels of the uterus, perhaps of the ovaries also. In the species before us there is no actual suppression, but the quantity thrown forth is for the most part too small, and attended with severe and forcing pains about the hips and region of the loins, that clearly indicate a spasmodic constriction of the extreme vessels of the uterus. The secretion is hence extruded with

GEN. I.  
SPEC. II.  
How dis-  
tinct from  
the preced-  
ing species.  
Quantity of  
discharge  
too small;  
and pains  
about the  
loins.

GEN. I.  
SPEC. II.  
Paramenia  
difficilis.  
Laborious  
menstrua-  
tion.  
Secretion  
intermixed  
with blood.  
Adjoining  
organs  
affected.

Hope of a  
family pro-  
hibited.

Often  
chronic,  
and only  
terminates  
with the  
period of  
menstrua-  
tion itself.  
Occasional  
formation  
of mem-  
brane-like  
material,  
as in other  
organs  
under pe-  
culiar irri-  
tation.

Membrane  
resembles  
the decidua  
of impreg-  
nation.

great difficulty, and is sometimes perhaps of a morbid character: while from the force of the action the mouths of some of the vessels give way and a small portion of genuine blood becomes intermixed with the menstrual discharge, forming coagula in the midst of an uncoagulating fluid, and thus drawing a critical line of distinction between the two.

The spastic action, thus commencing in the minute vessels of the uterus, not only spreads externally to the lumbar muscles, but internally to the adjoining organs of the rectum or bladder, in many instances, indeed, to the kidneys; and hence an obstinate costiveness, and suppression of urine are added to the other symptoms, and increase the periodical misery, the frequent return of which embitters the life of the patient, and effectually prohibits all hope of a family: for if impregnation should take place in the interval, the expulsive force of the pains is sure to detach the embryo from its hold, and to destroy the endearing promise which it offers. These pains generally recur at the regular period, but often anticipate it by a day or two, and rarely cease till a week afterwards. The disease, moreover, is peculiarly obstinate, and in some instances has defied the best exertions of medical science, and has only yielded to time, and the natural cessation of the discharge.

We have frequently had occasion to observe, and especially under croup, and tubular diarrhoea, that where hollow and mucous organs labour under a certain degree of irritation, a portion of gluten is often thrown forth with the morbid secretion that takes place on the surface, and the result is the formation of a new membrane or membrane-like substance that lines the cavity to a greater or less extent: the nature of this substance being regulated by the nature of the organ in which it takes place. This remark applies particularly to the uterus under the influence of the irritation we are now speaking of; and, consequently, a membrane very much resembling the decidua, or that naturally elaborated by the uterus on impregnation, has been occasionally formed and dis-

charged in fragments \*, during the violence and forcing pain of laborious menstruation.

Cold, mental emotion, local injury from a fall, and, above all, a peculiar irritability of the uterus itself, are the common causes.

The cure of all the forms of paramenia, we have thus far noticed, is to be attempted first, by increasing the tone of the system in general, and next, by exciting the action of the uterine vessels, where they are morbidly torpid, or relaxing them where they are in pain from spasmodic constriction. Both the last, however, are subordinate to the first; for if we can once get the system into a state of good general health the balance of action will be restored, and the organs peculiarly affected will soon fall into the common train of healthful order.

To give strength and activity to the circulation is generally attempted by tonics: to give local action, by stimulants. Both these should be employed conjointly in the two forms of the first species. The astringent tonics, however, are supposed, and apparently with good reason, to be injurious, and in many instances to extend the retardation, or diminish the flow where there is any appearance. Myrrh has long been a favourite medicine, but its power does not appear to be very considerable in mis-menstruation, though it undoubtedly acts as a stimulant in phthisis, and has at times, in highly irritable habits, produced hæmoptysis. The metallic tonics are those on which we can chiefly depend; and of these the principal that have been employed are iron and copper. The first requires less care than the second, and has hence been more frequently recurred to as the safer. It has been given under a great variety of forms, but that of the sulphate, or green vitriol, is one of the best, and most readily obtained. It is often tried, in union with myrrh; and, where symptoms of dyspepsy exist, and

GEN. I.  
SPEC. II.  
Paramenia  
difficilis.  
Laborious  
menstrua-  
tion.

Ordinary  
causes.  
General  
curative  
process.

Particular  
treatment  
of Spec. I.  
or obstruct-  
ed men-  
struation :  
astringent  
tonics.

Metallic  
tonics.

Iron with  
myrrh:

\* Morgagni, De Sed. et Caus. Morb. Ep. XLVIII. 12.

Denman, Medical Facts and Observations. i. 12.



GEN. I.  
SPEC. II.  
Paramenia  
difficilis.  
Laborious  
menstrua-  
tion.

Treatment.  
and both  
with fixed  
alkali.

Iron why  
sometimes  
apparently  
astringent  
and at  
other times  
aperient.

Prepara-  
tions of  
copper un-  
certain.

Tinctura  
veneris  
volatilis.

Cuprum  
ammonia-  
tum.

especially acidity in the stomach, the two have been united with the fixed alkali, a combination which makes the celebrated draught so well known by the name of its inventor, Dr. Griffiths.

Iron is, by some writers, supposed to show an astringent, and by others, an aperient power. In different constitutions it may be said to operate both ways. "If for example," says Dr. Cullen, "a retention of menses depends upon a weakness of the vessels of the uterus, chalybeate medicines, by invigorating the force of the vessels may cure the disease, and thereby appear to be aperient: and on the contrary in a menorrhagia, when the disease depends upon a laxity of the extreme vessels of the uterus, iron exhibited, by restoring the tone of these vessels may show an astringent operation\*.

The preparations of copper labour under two disadvantages: they are essentially more astringent than many of the other metals, and at the same time more uncertain in their effect. They are, perhaps, more soluble in the stomach than any other metallic preparations, wherever there is a sufficient proportion of acid for this purpose: but as the quantity of acid in this organ is constantly varying, their effect must vary also. Dr. Fordyce advises to avoid cupreous preparations when the intention is to strengthen; but when we attempt to lessen irritability he observes that they are extremely useful; and hence, their advantage in epilepsy and plethoric hysteria. It is, however, a just remark of Dr. Saunders, that all solutions of metals are sedative and ease pain, or, in other words, take off irritability, provided the solution be not too strong. The old tinctura veneris volatilis, consisting of one drachm of filings of copper infused in twelve drachms of water of ammonia, is one of the simplest, and best preparations of this metal; and forms a good substitute for the cuprum ammoniacum, or c. ammoniatum of the Edinburgh and London Pharmacopœias. Boerhaave directs

\* Mat. Med. Vol. II. p. 22, 4to.

us to begin with three drops as a dose, and gradually to increase it to twenty-four.

The chalybeate mineral waters have also been used with considerable success, and the more so as with these are usually conjoined the advantages of travelling, change of air, and a new stimulus given to both the mind and body by novelty of scene, novelty of company, amusing and animating conversation, and exercise of various kinds. With these may also be combined, in the intervals of the menstrual season, and particularly before the discharge has appeared, the use of cold, and especially of sea-bathing. An unnecessary apprehension of catching cold by the employment of this powerful tonic has been entertained by many practitioners: with proper care I have never known it produce this effect; and it should only be relinquished where no re-active glow succeeds to the chill produced by immersion, and the system is hereby proved to be too debilitated for its use.

The stimulants to be employed under the first species, in conjunction with a tonic plan, are those that operate generally and locally. The general stimulants should consist of those that do not exhaust the excitability or nervous power of the frame, but rather by the moderation of their effect, and the constancy of their application, support and augment it. Exercise, which we have already recommended, will in this view also be of essential service; as will likewise be uniform warmth; and hence, the warmth of a mild climate, and a generous diet with a temperate use of wine. Hence also the benefit of friction and electricity applied directly to the hypogastric and lumbar regions\*.

As the depressing passions produce the disease, the elevating passions have been often known to operate the best and speediest cure. It has sometimes suddenly

GEN. I.  
SPEC. II.  
Paramenia  
difficilis.  
Laborious  
menstrua-  
tion.  
Treatment.  
Chalybeate  
mineral  
waters and  
their usual  
concomi-  
tants.  
Cold sea-  
bathing.

Stimulants  
general and  
local.  
Character  
of general  
stimulants.

Friction  
and elec-  
tricity.

Sometimes  
cured by  
the ele-  
vating  
passions:

\* Alberti, Diss. de Vi Electrica in Amenorrhœam, seu Catameniorum obstructionem. Goett. 1764.

Birch, Considerations of the Efficacy of Electricity in Female Obstructions, &c. Lond. 1799.

GEN. I.  
SPEC. II.  
Paramenia  
difficilis.  
Laborious  
menstrua-  
tion.  
Treatment.  
and espe-  
cially by a  
return of  
hope.  
Stimulants  
operating  
locally.  
Generally  
denomi-  
nated  
emmena-  
gogues.  
Warm  
gums and  
balsams :  
irritating  
cathartics.  
Cantha-  
rides.  
Juniperus  
sabina or  
savine.

Rubia  
tinctorum.

yielded to a fit of joy\*, and, in one instance, from the violence of the emotion, to a fit of terror†. We can hence easily see how it may be induced by disappointed love and removed by a return of hope, and a prospect of approaching happiness‡.

The stimulants operating locally in this disease are known by the name of emmenagogues. In the old writers the catalogue of these is very numerous. Those that are most worthy of notice consist of the warmer gums and balsams, as guaiacum, assafoetida, turpentine, and petroleum; castor, and the more irritating cathartics, as aloes and black hellebore. The last is, in most cases, too stimulant upon the whole range of the intestinal canal, though at one time in high favour as an emmenagogue. Aloes is a very valuable medicine. Dr. Adair gave it in combination with cantharides; but in this form it will often be found to produce a troublesome irritation on the rectum or bladder, rather than a salutary stimulus to the vessels of the uterus.

The juniperus *Sabina*, or common savine, is also a valuable medicine, as being both stimulant and slightly aperient, and operating not only locally but upon the system at large. It may be given in powder, extract, or essential oil: of the powder, the dose varies from a scruple to a drachm twice or three times a day: of the extract from half a scruple to half a drachm; and of the essential oil from two to four drops. Dr. Home thought highly of it, and M. Herz has praised it in equal terms§. The former declares that by employing the scruple doses three times a-day he succeeded in three out of five cases. But the most favourite emmenagogue in his hands, was the root of the rubia *tinctorum* or madder. Of nineteen cases, of which he gives an account, fourteen, he tells us, were cured by it. From half a drachm to a drachm was

\* Medicin. Wochenblatt, 1782. p. 416.

† Walther, Thes. Obs. 37.

‡ Eph. Nat. Cur. Dec. I. Ann. IX. x. Obs. 58.

§ Briefe, II. p. 5.

prescribed twice or oftener daily. Dr. Home asserts that, in this quantity, it produces scarcely any sensible operation, never quickens the pulse nor lies heavy on the stomach; yet that it generally restores the discharge before the twelfth day from the time of its commencement\*. The present author has never tried it; he has been deterred by the very different, and even contradictory accounts of its effects upon the constitution which have been given by different writers of high authority. While Dr. Home found it thus beneficial in cases of obstructed menstruation, Dr. Parr tells us that it produced a cure in excessive menstruation, but in the former disease effected no change whatever†. From its tinging the urine of a red colour it has been supposed to be a powerful diuretic, but even this quality it has been incapable of supporting: and yet in the opinion of Dr. Cullen this seems to be its only pretension to the character of an emmenagogue‡. Given freely to brute animals Dr. Cullen tell us, that it always disorders them very considerably, and appears hurtful to the system. Its direct virtues do not therefore seem to have been in any degree ascertained; but let them be what they may, it has deservedly fallen into disrepute as a remedy for any misaffection of the uterus.

The *athamanta Meum*, or spiguel, which once rivalled the reputation of madder, and has long sunk with it into desuetude, is better entitled to notice, and ought not to be abandoned. It seems to have a peculiar influence in stimulating the lower viscera, and especially the uterus and bladder; and is no indifferent sudorific. On this last account it was at one time highly in favour also in intermittents, and was afterwards employed in hysteria, and humoral asthma.

This part of the subject must not be quitted without

GEN. I.  
SPEC. II.  
Paramenia  
difficilis.  
Laborious  
menstrua-  
tion.  
Treatment.  
Madder.  
Contradic-  
tory ac-  
counts of  
its virtues  
and effects.

Has deserv-  
edly fallen  
into dis-  
repute.

Athamanta  
Meum :  
spiguel.

\* Clinical Experiments, Histories, &c. 8vo. 1780.

† Med. Dict. Vol. II. in verb. p. 524.

‡ Mat. Med. Vol. II. p. 553. 4to. edit. comp. with p. 38, of the same.



GEN. I.  
SPEC. II.  
Paramenia  
difficilis.  
Laborious  
menstrua-  
tion.  
Treatment.  
Spurred  
rye.  
Description  
of its pow-  
erful ac-  
tion.

glancing at a medicine that has lately acquired great popularity in North America, as an emmenagogue, and is said to have been employed with unquestionable success. This is spurred rye, or rye vitiated by being infested with the clavus or ergot, a parasitic plant which we have already had occasion to notice as producing a powerful effect on the whole system, and especially on the nervous part of it, and the abdominal viscera in general. When taken in such a quantity as to be poisonous, it first excites a sense of tingling or formication, and fiery heat in the extremities, where the action of the system is weakest; to this succeed cardialgia, and griping pains in the bowels; and then vertigo, an alternation of clonic and entonic spasms in different parts of the body, and mania, or loss of intellect. If the quantity be something smaller than this, it excites that pestilent fever, which the French denominate *mal des ardens*, and in the present work is described under the name of *PESTIS erythematica*\*: while in a quantity still smaller it seems to spend itself almost entirely on the extremities as being the weakest part of the body, and to produce that species of *GANGRÆNA*, which is here denominated *ustilaginea*, or *MILDEW MORTIFICATION*†.

In what  
proportion  
taken.

It is hence a very acrid irritant, and from its peculiar tendency to stimulate the hypogastric viscera, seems often, in small quantities, to prove a powerful emmenagogue. For this purpose an ounce of spurred rye is boiled down in a quart of water to a pint: half of which is usually taken in the course of the day, both in obstructed and difficult menstruation, and continued for three or four days. The symptoms said to be produced are head-ache, increased heat, and occasional pain in the hypogastrium, succeeded by a free and easy flow of the menstrual fluid. Advantage has been taken of this effect on another occasion, for the same medicine has been pre-

\* Vol. II. p. 642. 644.

† Vol. II. p. 914.

scribed in lingering labours, and we are told, by Dr. Bigelow, with the best success, as good forcing pains are hereby very generally produced speedily\*. In this case Dr. Bigelow, instead of a decoction of spurred rye, prefers giving the crude powder, to the amount of ten grains to a dose.

GEN. I.  
SPEC. II.  
Paramenia  
difficilis.  
Laborious  
menstrua-  
tion.  
Treatment.

We have hitherto regarded the spur in spurred rye, and other grain, as a clavus or species of ustilago. It was formerly, however, conceived to be a disease of the grain itself. M. Decandolle has since described it as a variety of champignon, under the name of sclerotium, from its rendering the grain hard and horny. And M. Virey in a work reported upon by M. Desfontaines, to the Academy of Sciences of the French Institute in 1817, has still more lately endeavoured to revive the obsolete opinion, by contending that it is a specific disease of the plant under which the grain is rendered not properly speaking hard and horny, as is actually the case when infested with the sclerotium, but rather friable and easily detached.

Nature of  
the spur in  
rye in  
some mea-  
sure un-  
settled.  
Sclerotium  
of Decan-  
dolle.  
A disease  
of the plant  
according  
to Des-  
fontaines.

There is something highly plausible and ingenious in the plan that was at one time tried rather extensively, of compressing the crural arteries by a tourniquet, and thus gorging the organs that lie above and are supplied from collateral branches. By compressing the jugular veins we can easily gorge the head and endanger extravasation and apoplexy. But it appears upon trial that the tide thus dammed up in the case before us, is thrown back upon too many organs to produce any very sensible effect upon the uterus. Independently of which the uterus is not like the brain, exactly inclosed in a bony box that prohibits a general and equable dilatation of its vessels. In six cases in which Dr. Home made experiment of this remedy, he succeeded but once; and others have been less successful still†.

Compres-  
sion of the  
crural  
arteries by  
the tour-  
niquet  
plausible,  
but has not  
generally  
succeeded.

\* New England Journ. of Med. and Surg. Vol. v. No. II.

† Hamilton, Edin. Com. Vol. II. Art. 31.

Weiz ad Fabric. iv. 98.

GEN. I.  
SPEC. II.  
Paramenia  
difficilis.  
Laborious  
menstrua-  
tion.

Treatment.

Obstructed  
menstrua-  
tion some-  
times a  
local affec-  
tion and to  
be reme-  
died only  
by local  
means.

Emetics  
useful in  
suppressed  
but not in  
retained  
menses.

Venesection  
when  
useful.

Impeded menstruation is sometimes, however, a disease strictly local, and proceeds from the obstruction of the passage by a polypus or other tumour or an imperforate hymen. In all these cases it is obvious that the cure must depend upon a removal of the local cause.

Emetics have often been recommended; they rouse the system generally, but have not often been found useful in retention of the menses: though when employed in cases of suppression, and especially at the regular periods of return, or so as to anticipate such return by a few days, they frequently prove a valuable adjunct. If this period be passed by without any salutary effect, and particularly, if, at the same time, the system labour under symptoms of oppression in the head or chest, venesection to the extent of from four to six ounces of blood will be found a very useful palliative, and will have a tendency to keep up that periodical habit of depletion which will probably prove advantageous against the ensuing lunations. Venesection will also be found useful and often absolutely necessary where the suspension has suddenly taken place during the flow of the catamenia, from cold, depressing passions, fright, or, indeed, any other cause.

Particular  
treatment  
of Spec. II.  
or difficult  
menstrua-  
tion.

The stimu-  
lant part  
of the pre-  
ceding pro-  
cess to be  
carefully  
abstained  
from: as  
well as  
every other  
excitement.

Cooling  
laxatives.

Local re-  
laxants.

Hip-bath.

In treating the second species of paramenia, or difficult menstruation, the stimulant part of the process we have thus far recommended must be sedulously abstained from, but the rest may be followed with advantage. Every thing, indeed, that has a tendency to produce local excitement, and in this respect the conjugal embrace itself, where the patient is married, must be systematically abstained from. The diet must be plain and inirritant, and the bowels be kept cautiously open with neutral salts or other cooling aperients. And, to allay the strong spasmodic action on which the severe pains in the lumbar and hypogastric regions depend, it will be found highly advantageous, a short time before the expected return of menstruation, to employ relaxants, and especially local relaxants; and of these, one of the best and pleasantest is the hip-bath, which ope-

rates directly upon the diseased quarter, and has a tendency to produce the desired effect without weakening the system generally. The ease and comfort of this valuable contrivance is acknowledged by almost all who have had recourse to it. Martini and various other writers recommend the cold bath in preference to the hot, and Tissot represents the latter as injurious. But this is to speak without due discrimination. That the cold-bath has been found of use in some instances is unquestionable: but only where there has been such a degree of energy in the constitution as to produce a reaction correspondent to the antecedent rigor. The direct effect of the cold bath is to constringe, and consequently where a spastic contraction exists already, as is mostly the case from local or constitutional debility, to increase the evil. But where the constitution is naturally robust, and but little inroad has hitherto been made upon its strength, the latent energy of the system is capable of resisting the sudden shudder: an increased action and consequently an increased and glowing heat ensue; the repelled fluids are forced forward; the blood flows more briskly; the mouths of the capillary vessels give way in every direction; the muscular fibres lose their rigidity, and the suppressed secretions, of whatever kind, recommence. And, hence it is, that cold bathing may sometimes be serviceable in the disease before us, and warm bathing less useful; but these cases are rare, and warm bathing is mostly to be preferred.

Even the hip-bath, however, though it mitigates the pain, occasionally does nothing more; there is the same paucity of discharge, the same intermixture of coagula, and the same tendency to a return of the disease. In such cases, it has been common to abstract eight or ten ounces of blood from the loins by cupping, antecedently to the use of the bath: and this, by diminishing the spastic constriction, has, at times, diminished in a still greater degree the distressing pain. But I do not think the hip-bath is in general had recourse to early enough to give it all the beneficial effect it may be made to pos-

GEN. I.  
SPEC. II.  
Paramenia  
difficilis.  
Laborious  
menstruation.  
Treatment.  
Cold-bath;  
its different  
effects explained:  
and hence  
its use and  
abuse.

Often necessary to  
premise  
bleeding by  
cupping-  
glasses applied to the  
loins.

Hip-bath in  
general not  
employed  
early  
enough.



GEN. I.  
SPEC. II.  
Paramenia  
difficilis.  
Laborious  
menstrua-  
tion.  
Treatment.

Moistened  
flannel-  
swathe  
worn  
through the  
night has  
often suc-  
ceeded  
where the  
hip-bath  
has failed.

sess. Instead of waiting till the periodical pains return, as is the common practice, I have found it more advantageous to anticipate this period, and to relax the vessels by employing it for two or three nights before the pains are expected. And where in this and every other way it has failed, or the patient from great delicacy of constitution has appeared too much exhausted by its use, I have availed myself of the same relaxant power in another way, and, with a like anticipation, have prescribed the use of a broad folded swathe of flannel wrung out in hot water, to be applied round the loins and belly at the time of going to rest, and bound over with a linen swathe of equal width, as already recommended in peritonitis, and hepatitis. The whole should be suffered to remain till the morning, by which time the warmth of the body will be usually found to have evaporated all the moisture, though the skin will still be dewy with perspiration from so powerful a sudorific. I have often found this plan succeed still better than the hip-bath; and have never known the patient catch cold, or complain of any chilly sensation from the use of the epithem.

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### SPECIES III.

## PARAMENIA SUPERFLUA.

### Superfluous Menstruation.

CATAMENIA EXCESSIVE, AND ACCOMPANIED WITH HEMORRHAGE FROM THE MENSTRUAL VESSELS.

GEN. I.  
SPEC. III.  
The nature  
of this spe-  
cies the re-  
verse of the  
preceding.

THIS species offers us a disease precisely the reverse of the last, not less in the facility with which the mouths of

the vessels give way, than in the quantity of the discharge. It exhibits the two following varieties :

- a* Reduplicata. Excessive from a too frequent recurrence.  
 Reduplicate menstruation.  
 € Profusa. Excessive from too large a flow at the proper periods.  
 Profuse menstruation.

GEN. I.  
 SPEC. III.  
 Paramenia  
 superflua.  
 Superfluous  
 menstrua-  
 tion.

The second variety, or profuse menstruation, is often technically distinguished by the name of menorrhagia. It is, in effect, the menorrhagia rubra of Cullen, who makes it a distinct affection from metrorrhagia or hemorrhagia uteri, by confining the latter term to a signification of hemorrhage from other vessels of the uterus than those concerned in separating and discharging the catamenial flux.

Meno-  
 rrhagia  
 what ?  
 How dis-  
 tinguished  
 by Cullen  
 from me-  
 trorrhagia.

We have already observed that we cannot lay down any general rule to determine the exact quantity of fluid that ought to be thrown forth at each lunation, some individuals secreting more and others less ; and the measure varies from four to eight or ten ounces. We can only, therefore, decide that the quantity is immoderate and morbid when it exceeds what is usually discharged by the individual, or when it is associated with unquestionable symptoms of debility, as paleness of the face, feebleness of the pulse, unwonted fatigue on exercise ; coldness in the extremities, accompanied with an edematous swelling of the ancles towards the night, pain in the back in an erect posture ; and various dyspeptic affections.

How to de-  
 cide when  
 the quan-  
 tity dis-  
 charged is  
 in morbid  
 excess.

Either of the varieties may be entonic or atonic, or, in common language, active or passive : but in the first there is usually a greater degree of local irritability than in the second, so that the secernents are excited, or the extremities of the minute blood-vessels open upon very slight occasions. As the disease may occur under these two different states of body, it may proceed, as Dr. Gulbrand has observed, from an increased impetus in the circulation, a relaxed state of the solids, or an

Either va-  
 riety may  
 be entonic  
 or atonic.  
 The first  
 how distin-  
 guished  
 from the  
 second.

GEN. I.  
SPEC. III.  
Paramenia  
superflua.  
Superfluous  
menstrua-  
tion.

Causes in  
an entonic  
habit.

Causes in  
an atonic  
habit.

Proceeds  
often from  
a life of in-  
dolence and  
enervating  
luxury.

Venesec-  
tion here  
mischiev-  
ous:  
and every  
luxurious  
excess  
should be  
restrained.

Mild tonics  
with astrin-  
gents, and  
occasion-  
ally unirri-  
tating laxa-  
tives.

General  
tonic re-  
gimen.

Astringent  
injections.

Plugging  
the vagina.

attenuate state of the fluids \*: to which he might have added uterine congestion.

Increased impetus usually indicates great robustness of constitution, or an entonic habit, and is not unfrequently connected with uterine gestation; and the accidental causes are, in many cases, cold, a violent shock or jar, or an accidental blow. Under this form the disease commonly yields to venesection, cooling laxatives, and quiet.

Superfluous menstruation from atony, or in other words, a relaxed state of the solids, and an attenuate state of the fluids, frequently arises from repeated miscarriages or labours, poverty of diet, and an immoderate indulgence in sexual pleasure. It often proceeds, also, and especially in the higher ranks, from a life of indolent ease, and enervating luxury, producing what we have denominated atonic plethora, lax vessels easily distended by a current of blood superfluous in quantity but loose and unelaborate in crasis, and which is reproduced, and perhaps still more abundantly but at the same time still more loosely, as soon as the excess is attempted to be removed by bleeding.

Here, therefore, venesection is almost sure to do mischief; we must restrain every luxurious excess as far as it may be in our power, and we may have authority enough to insure a compliance, which is not always the case; we must employ, at the same time, the milder tonics with astringents, as kino, catechu, or sulphate of zinc, and carefully guard against costiveness by cool unirritating laxatives. If the discharge be very considerable, astringent injections of cold water, or which will commonly be found better, of a solution of alum or zinc, or cold water with a third part of new port wine, should be had recourse to without fail; or the vagina may be closely plugged up with a sponge, confined with a proper bandage. Early hours are of especial importance, with

\* De Sanguine Uterino. 8vo, Havn. 1778,

a due intermixture of moderate exercise, and the use of cold sea-bathing. The Cheltenham waters, as those also of many other chalybeate springs, have often proved serviceable, partly from their own medicinal powers, and partly from the greater purity of air and increase of exercise with which a temporary residence at a watering-place is usually accompanied.

It is a common observation, in moral as well as in physical philosophy that extremes meet in their effects, or produce like results. There is, perhaps, no part of natural history in which this is more frequently exemplified than in the sphere of medicine. In the case of apoplexies and palsies, as well as various other diseases, we have had particular occasion to make this remark; and in the genus immediately before us, as well as others closely connected with it, we have another striking instance of its truth. "The proportion of the diseases peculiar to the female sex in the hospital," says Sir Gilbert Blane, speaking from tables accurately kept by himself for this purpose, "is the same as in private cases; from which it would appear that the unfavourable influence of indolent habits, excessive delicacy, and sensibility of mind and body in the upper ranks, compensate for the bad effects of hard labour and various privations in the lower orders."

GEN. I.  
SPEC. III.  
Paramenia  
superflua.  
Superfluous  
menstrua-  
tion.

The disease  
equally  
common to  
rich and  
poor:  
explained.

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## SPECIES IV.

### PARAMENIA ERRORIS.

#### *Vicarious Menstruation.*

CATAMENIA TRANSFERRED TO, AND EXCRETED AT RE-  
MOTE ORGANS.

WE have already observed upon the extensive sympathy which the sexual organs maintain with every other part

GEN. I.  
SPEC. IV.  
Extensive  
sympathy  
maintained  
by the  
sexual or-  
gans with  
every part.



GEN. I.  
SPEC. IV.  
Paramenia  
erroris.

Vicarious  
menstrua-  
tion.

Whence,  
on obstruc-  
tion almost  
every  
organ offers  
a vicarious  
outlet:

as the eyes,  
nostrils,  
sockets of  
the teeth,  
ears, nip-  
ples, sto-  
mach,  
bladder,  
navel, and  
skin gene-  
rally.

Hardly an  
organ from  
which the  
fluid has  
not been  
discharged.

Singular  
illustration.

Uterine  
torpitude  
and general  
debility al-  
ways pre-  
sent in  
these cases.

of the system. With the exception of the stomach, which is the grand centre of sympathetic action, there is no organ, or set of organs, possessed of any thing like so wide an influence. And hence, where, from any particular circumstance, as sudden fright or cold, the mouths of the menstrual vessels become spasmodically constricted at the period of menstruation, and the fluid is not thrown forth, almost every organ seems ready to offer it a vicarious outlet. We have accounts, therefore, of its having been discharged, by substitution, from the eyes, the nostrils, the sockets of the teeth, the ears, the nipples, the stomach, the rectum, the bladder, the navel, and the skin generally, as noticed more fully in the volume of Nosology to which the reader may turn at his leisure.

In effect, there is scarcely an organ of the body from which it has not been discharged under different circumstances\*. In the Edinburgh Medical Essays is a very singular case of its being thrown forth from an ulcer in the angle of a young woman little more than twenty years of age, and which continued to flow at monthly periods, for two or three days at a time, for about five years: after which, some part of the bone having separated in a carious state, the ulcer assuming a more healthy appearance, and the body becoming plumper and stronger, the vicarious outlet was no longer needed, and the menstrual tide returned to its proper channel†.

In all these cases there is a considerable degree of uterine torpitude, and commonly of general debility: while the part forming the temporary outlet is in a state of high irritability or other diseased action. And hence the remedial process should consist in allaying the remote

\* Eph. Nat. Cur. passim. Act. Nat. Cur. Act. Med. Berol.

Bertholin. Obs. passim. Cent. passim.

Pechlin, Lib. i. passim.

Bierling. Thes. Pract.

Sennertus, Pract. et Paralip. Lib. iv.

Art. by Mr. James Calder, Vol. III. Art. xxix. p. 341.

irritation, strengthening the system generally, and gradually stimulating the uterus to a state of healthy excitement by the means already recommended.

GEN. I.  
SPEC. IV.

## SPECIES V.

### PARAMENIA CESSATIONIS.

#### *Irregular Cessation of the Menses.*

CATAMENIAL FLUX IRREGULAR AT THE TERM OF ITS NATURAL CESSATION; OCCASIONALLY ACCOMPANIED WITH SYMPTOMS OF DROPSY, GLANDULAR TUMOURS, OR SPURIOUS PREGNANCY.

THE set of organs that are most tardily completed and soonest exhausted are those of the sexual system. They arrive latest at perfection and are the first to become worn out and decrepit. In this early progress to superannuation the secretory vessels of the uterus grow torpid, and, by degrees, the catamenial flux ceases. This cessation, however, has sometimes been protracted to a very late period, and, in a few rare instances, the menses have continued nearly, or altogether, through the whole term of life: we have examples of it, noticed in the volume of Nosology, at seventy, eighty, and even ninety years of age; but the usual term is between forty and fifty, except where women marry late in life, in which case, from the postponement of the generative orgasm, they will, occasionally, breed beyond their fiftieth year. On approaching the natural term of the cessation of the menses, the sexual organs do not always appear to act in perfect harmony with each other, and perhaps, at times, not even every part of the same organ with every other part. In proof of the first remark, we seem,

GEN. I.  
SPEC. V.  
Sexual organs last completed and first exhausted. Time of sensation varies in different constitutions:

has not taken place before eighty or ninety.

Usual period between forty and fifty. Cessation how rendered a disease.

GEN. I.  
SPEC. V.  
Paramenia  
cessationis.  
Irregular  
cessation  
of the  
menses.

Sometimes  
accompa-  
nied with a  
vain sense  
of preg-  
nancy, and  
many of its  
symptoms.  
Sometimes  
great irri-  
tation of  
the uterus,  
and irregu-  
lar men-  
struation.

The period  
requires a  
careful  
watch.

Palliative  
treatment.

Bleeding  
how far to  
be in-  
dulged.

occasionally, to meet with a lingering excitement in the ovaria, after all excitement has ceased in the uterus: and we have hence a kind of conceptive stimulation, a physicony of the abdomen, accompanied with peculiar feelings, and peculiar cravings, which mimic those of pregnancy, and give the individual room to believe she is really pregnant, and the more so in consequence of the cessation of her lunar discharge, while the uterus takes no part in the process, or merely that of sympathetic irritation, without any change in size or structure.

On the contrary, we may chance to find the uterus itself chiefly, if not solely affected with irregular action at this period: evincing, sometimes a suppression of menstruation for several months, sometimes a profuse discharge at the proper period, and sometimes a smaller discharge returning every ten or twelve days, often succeeded by leucorrhœa. And not unfrequently the system associates generally in the misaffection, and suffers from oppression, head-ache, nausea, or universal languor.

All these are cases that require rather to be carefully watched, than vigorously practised upon; and the character of an expectant physician, as the French denominate it, is the whole that is called for. The prime object should be to quiet irregular local irritation wherever necessary, by gentle laxatives, moderate opiates, or other narcotics, and to prevent any incidental stimulus, mental emotion, or any other cause from interfering with the natural inertness into which the sexual system is progressively sinking. Hence the diet should be nutritive but plain; the exercise moderate; and costiveness prevented by lenient, but not cold eccoproctics: aloes, though most usually had recourse to, from its pungency, in earlier life, is one of the worst medicines we can employ at this period, as the Epsom salts, warmed with any pleasant aromatic, is, perhaps, one of the best.

If the constitution be vigorous and plethoric, and particularly if the head feel oppressed and vertiginous, six or seven ounces of blood may, at first, be taken from the arm; but it is a practice we should avoid if possible, from the

danger of its being necessarily resorted to again, and at length running into an inconvenient and debilitating habit.

The mammæ that constantly associate in the changes of the uterus and constitute a direct part of the sexual system, are at this time, also, not unfrequently in a state of considerable irritation; and if a cancerous diathesis be lurking in the constitution, such irritation is often found sufficient to excite it into action. And hence, the period before us is that in which cancers of the breast most frequently show themselves.

From the natural paresis into which this important and active system is hereby thrown, a certain surplus of sensorial power seems to be let loose upon the system, which operates in various ways. The ordinary and most favourable mode is that of expending itself upon the adipose membrane generally, in consequence of which a larger portion of animal oil is poured forth, and the body becomes plump and corpulent. The most unfavourable, next to the excitement of a cancerous diathesis into action, is that of irritating some neighbouring organ, as the spleen, or liver, and thus working up a distressing parabysma or visceral turgescence; or deranging the order of the stomach, and laying a foundation for dyspepsy.

GEN. I.  
SPEC. II.  
Paramenia  
cessationis.  
Irregular  
cessation of  
the menses.  
Mammæ  
often in a  
state of ir-  
ritation  
from sym-  
pathy:  
and hence,  
occasion-  
ally can-  
cers.  
Stock of  
sensorial  
power here-  
by redun-  
dant, scat-  
tered over  
the system  
in different  
ways.  
Sometimes  
generally  
and produ-  
cing corpu-  
lency.  
Sometimes  
locally and  
inducing a  
tumid liver  
or other  
organ.



## GENUS II.

## LEUCORRHŒA.

## Whites.

MUCOUS DISCHARGE FROM THE VAGINA, COMMONLY WITHOUT INFECTION; DISAPPEARING DURING MENSTRUATION.

GEN. II.  
Origin of  
the generic  
term.

THE term leucorrhœa from λευκός, "white," and ῥέω, "to flow," is apparently of modern origin; as it is not to be found in either the Greek or Roman writers; and seems first to have been met with in Bonet or Castellus.

Menor-  
rhagia alba  
of Cullen.

This is the menorrhagia *alba* of Dr. Cullen, so denominated because he conceives the evacuation to flow from the same vessels as the catamenia; as also that it is often joined with menorrhagia, or succeeds to it. Its source, however, is yet a point of dispute\*; Stoll†, Pinæus, and various other distinguished writers have ascribed it, like Cullen, to the uterus. But as it occurs often in great abundance in pregnant women, in girls of seven, eight, and nine years of age‡, and even in infants, it has been supposed by Wedel§, and most writers of the present day, to flow from the internal surface of the vagina, or at the utmost, from the vagina jointly with the cervix of the uterus. Morgagni is, perhaps, most correct, who conceives, and appears, indeed, to have proved by dissections, that, in different cases, the

Source of  
the dis-  
charge a  
point of  
dispute.

Probably  
flows from  
both the  
vagina and  
cervix of  
the uterus.

\* Rat. Med. P. vii. p. 155.

† De Notis Virginitatis. Lib. i. Prob. 3.

‡ Heister, Wahrnehmungen, B. ii. N. 128.

Hoechstatter, Obs. Med. Dec. iv. Cas. i. Schol.

§ Diss. De Fluore albo, Jen. 1743.

morbid secretion issues from both organs; for he has sometimes found the uterus exhibiting in its internal surface whitish tubercles, tumid vessels, or some other diseased indication, and sometimes the vagina, during the prevalence of this malady \*. In the case narrated by Mr. Hill, of Dumfries, and noticed under the preceding genus, it was evidently confined to the vagina alone †.

GEN. II.  
Leucorrhœa.  
Whites.

From its frequency in Sweden, Riedlin conjectures it to be endemic there ‡: but this can hardly be allowed, and there are more obvious causes to which such frequency may be referred.

Said to be endemic, but without sufficient authority.

When first secreted it is bland and whitish, but differs in colour and quality under different circumstances, and hence affords the three following species:

Qualities.

- |    |                      |                          |
|----|----------------------|--------------------------|
| 1. | LEUCORRHŒA COMMUNIS. | COMMON WHITES.           |
| 2. | ———— NABOTHI.        | LABOUR-SHOW.             |
| 3. | ———— SENESCENTIUM.   | WHITES OF ADVANCED LIFE. |

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\* De Sed. et Caus. Morb. Ep. XLVII. Art. 12. 14. 16, 17, 18, 19. 27.  
Ep. LXVII. Art. 14.  
† Edinb. Med. Comment. iv. p. 91.  
‡ Lin. Med. 1695. p. 164.

## SPECIES I.

## LEUCORRHŒA COMMUNIS.

## Common Whites.

THE DISCHARGE OF A YELLOWISH-WHITE COLOUR, VERGING TO GREEN.

GEN. II.  
SPEC. I.  
Fluor albus  
of most  
writers.  
Description.

THIS species is the fluor albus of most writers. It is found in girls antecedently to menstruation, or on any simple local irritation in the middle of life, and hence also, as just observed, during pregnancy. It is said in the Berlin Transactions to be occasionally contagious\*: and I have met with various cases which seem to justify this remark.

Causes.

It has occurred as the result of suppressed menstruation: as it is said also to have done on a suppressed catarrh†; and chillness or suppressed perspiration of the feet‡. Local irritations moreover are frequent causes. And hence one reason of its being an occasional concomitant of pregnancy; as also of its being produced by pessaries injudiciously employed, by voluptuous excitements, and uncleanness. It is said at times to exist as a metastasis, and particularly to appear on a sudden failure of milk during the period of lactation; a failure which may be set down to the list of suppressed discharges§. Jensen gives a singular case of leucorrhœa that alternated with a pitting cough||.

Produced  
by meta-  
stasis.

Has alternated with  
other complaints.

\* Act. Med. Berol. Dec. 1. Vol. v. p. 85.

† Act. Erud. Lips. 1709, p. 376.

Raulin, Sur les Fleurs blanches, p. 329.

‡ Act. Nat. Cur. Vol. viii. Obs. 38.

§ Astruc, De Morb. Mulier. Lib. 1. cap. 10.

|| Prod. Act. Havn. p. 160.

It is usually accompanied with a sense of languor, and a weakness or pain in the back. And if it become chronic, or of long continuance, the countenance looks pale and unhealthy, the stomach is troubled with symptoms of indigestion, the skin is dry and feverish, and the feet edematous.

GEN. II.  
SPEC. I.  
Leucor-  
rhœa com-  
munis.  
Common  
whites.  
Symptoms  
and pro-  
gress.

The discharge, in its mildest form, is slimy, nearly colourless, or of an opaline hue, and unaccompanied with local irritation. It afterwards becomes more opaque and muculent, and is accompanied with a sense of heat, and itching or smarting; in this stage it is of a yellowish-white. But as the disease advances in degree it appears greenish, thinner, more acrid, and highly offensive, and is apt to excoriate the whole surface of the vagina: while there is often a considerable degree of pain in the uterus itself and even in the loins.

Among novices there is some difficulty in distinguishing the discharge of whites from that of blenorrhœa, which we shall describe presently. But though the appearance of the two fluids is often similar, they may easily be known by their accompanying signs. In blenorrhœa there is local irritation from the first, and this irritation extends through a considerable part of the meatus urinarius, so as to produce a considerable pain in making water; symptoms which are not found in leucorrhœa. There is also from the first in the former a swelling of the labia, a more regular though a smaller secretion, and of a more purulent appearance.

How distin-  
guishable  
from blenor-  
rhœa.

When the disease is violent, or of long continuance, it leads to great general as well as local debility, so as in some instances to make sad inroads on the strength of the constitution. It has sometimes been followed by a prolapse of the uterus or vagina\*; by abortion or miscarriage, where there is pregnancy; and by barrenness, where no pregnancy has occurred. When it acts on the system at large, it has given rise to cutaneous eruptions

Constitu-  
tional mis-  
chief, when  
violent.

\* Boehman, Diss. de Prolapsu et Inversione Uteri. Hal. 1745.



GEN. II.  
SPEC. I.  
Leucor-  
rhœa com-  
munis.  
Common  
whites.  
Medical  
treatment.

of various kinds \*; and is said to have introduced tabes and hectic fever †, scirrhus, and cancer ‡.

The cure is often difficult: but it is of no small importance to be, from the first, fully acquainted with the nature of its cause and character, for the proper means to be pursued will mainly depend upon this. And hence it will often be necessary to examine the organs themselves, or to entrust the examination to a nurse on whose judgement we can fully depend.

Local  
remedies.

If the cause be uncleanness, a lodgement of some portion of a late menstrual flux, or any other acuating material in the vagina, nothing more may be necessary than frequent injections of warm water: or if the vagina itself be much irritated, injections of the diluted solution of the acetate of lead: which last will often indeed be found highly serviceable where the discharge proceeds from debility and relaxation produced by a severe labour or miscarriage, forming no uncommon causes: as they are also no uncommon effects.

Other as-  
tringent in-  
jections.

Other astringent injections have often been tried, as green tea, a solution of alum, or sulphate of zinc, a decoction of pomegranate bark, or a solution of catechu. All these are sure to be of service as tending to wash away the discharge, and keep the parts clean; and in many cases they will also succeed as astringents: nor is it always easy to determine which is to be preferred, for in some cases one answers the purpose best, and in others another.

Fume of  
sulphur.

Sir Kenelm Digby recommended a local application of the fume of sulphur §, which may be communicated in various ways; and so far as this has a tendency to change the nature of the morbid action, by originating a new excitement, it is worthy of attention; but perhaps the

Aqua-regia  
bath.

\* Klein, *Interpres Clinicus*, p. 112.

† Hippocr. *Aph. Sect. v.*

‡ Raulin, *Sur les Fleurs blanches*. Tom. I. passim.

§ *Medic. Experiment*, p. 65.

diluted aqua-regia bath, of which we have spoken under spasmodic jaundice \*, may prove more advantageous.

The disease, however, is often highly troublesome and obstinate, and hence it has been necessary to employ constitutional as well as local means.

The general remedies that have been had recourse to are almost innumerable. Acids have been taken internally in as concentrated a state as possible, but rarely with much success. The sulphuric acid has been chiefly depended upon: and, in the form of the eau de Rabel, which is that of digesting one part to three of spirit of wine, it was at one period supposed to be almost a specific. The compound, however, has not been able to maintain its reputation, and has long sunk into disuse.

Emetics have been found more useful, as operating by revulsion and stimulating the system generally: and on this ground a sea-voyage accompanied with sea-sickness has often effected a cure. Stimulating the bowels, and particularly in the commencement of the disease, and where the general strength has not been much encroached upon, has for the same reason been frequently found useful, as transferring the irritation to a neighbouring organ, and under a more manageable form. And one of the best stimulants for this purpose is sulphate of magnesia. Small doses of calomel have been given daily with the same view, but they have not succeeded in general. Heister, however, recommended mercury in this disease even to the extent of salivation †; yet this is a very doubtful remedy, and even under the best issue purchases success at a very dear rate. A spontaneous salivation has sometimes indeed effected a cure ‡; but this is a very different affair, for here the blood is not broken down into a dilute state, nor the general strength interfered with. Mr. John Hunter, with a view of changing the nature of the

GEN. II.  
SPEC. I.  
Leucor-  
rhœa com-  
munis.  
Common  
whites.  
Treatment.  
Disease  
often trou-  
blesome  
and ob-  
stinate.  
General  
remedies.  
Acids.

Emetics.

Purgatives.

Mercury  
so as to  
produce  
salivation.

Mercurial  
inunction.

\* Medic. Experiment, Vol. i. p. 380.

† Wahrnehmungen. Band. II.

‡ Eph. Nat. Cur. Dec. III. Ann. ix. x. Obs. 140.

GEN. II.  
SPEC. I.  
Leucor-  
rhœa com-  
munis.  
Common  
whites.  
Treatment.  
Irritants of  
mucous  
membranes  
as the tere-  
binthinate  
prepara-  
tions.  
Tincture of  
cantha-  
rides.

Astrin-  
gents.  
Potentilla  
anserina:  
or wild  
tansey.

Alum.

Kino.

Best  
general  
treatment.

morbid action in its own field, advised mercurial inunctions in the vagina itself.

Other stimulants have been recommended that operate more generally, and have a peculiar tendency to influence the secretion of mucous membranes, as the terebinthinate preparations, particularly camphor, balsam of copaiva, and turpentine itself: and there is reason to believe that the second of these has often been useful. It has sometimes been employed in combination with tincture of cantharides: but the latter is, in most instances, too irritating, whether made use of alone, or with any other medicine.

As the acids have not succeeded, neither have other astringents to any great extent. The argentina or wild tansy (*Potentilla anserina*, Linn.) was at one time in high favour; it was particularly recommended by M. Tournefoot, and, upon his recommendation, very generally adopted. Alum has been supported by a still greater number of advocates for its use; and kino has, perhaps, been employed quite as extensively. Dr. Cullen asserts that he has tried all these alone without success, but that by uniting kino and alum, as in the *pulvis stypticus* of the Edinburgh College, he obtained not only a most powerful astringent, but one that had occasionally proved serviceable in the present disease. The anserina has justly sunk into oblivion.

Upon the whole, the best general treatment we can recommend is a use of the metallic tonics, and especially zinc and iron, in conjunction with a generous but temperate diet, exercise that produces no fatigue, pure air, and change of air, cold bathing, regular and early hours, and especially a course of the mineral waters of Tunbridge or Cheltenham.

## SPECIES II.

## LEUCORRHŒA NABOTHI.

~~Labour=show.~~

THE DISCHARGE SLIMY, AND MOSTLY TINGED WITH  
BLOOD.

IN this species the fluid is secreted by the glandulæ Nabothi situate on the mouth of the uterus, whence the specific name. It is the leucorrhœa *Nabothi* of Sauvages, and the hæmorrhagia *Nabothi* of Cullen. It is most usually found as the harbinger of labour: and indicates that the irritation which stimulates the uterus to spasmodic and expulsive contractions, when the full term of pregnancy has been completed, or some accident has hurried forward the process, has now commenced, and that the pains of child-birth may be expected soon. It is probably nothing more than the usual fluid secreted by the glands from which it flows, augmented in quantity in consequence of temporary excitement, and mixed with a small quantity of blood thrown forth at the same time, and from the same cause, by the mouths of the exhalants which gives it, soon after its first appearance, a sanguineous hue. It is hardly entitled to the name of a hæmorrhage, as given by Dr. Cullen, though blood from the uterus often succeeds to it, apparently thrown forth by anastomosis, in consequence of the violence of the pains.

GEN. II.  
SPEC. II.  
Synonyms.  
Where  
usually  
found.

Probable  
source.

In its ordinary occurrence it is only worthy of notice, as a deviation from the common secretions of health, and is rather to be hailed than to become a subject of cure or removal. But there is a state of irritation to which these glands are sometimes subject that produces the same dis-

Sometimes  
chronic and  
trouble.  
some.



GEN. II.  
SPEC. II.  
Leucor-  
rhea  
Nabothi.  
Labour-  
show.  
Mode of  
treatment.

charge, and in considerable abundance, for many weeks or months before labour, and which, for the comfort of the patient, requires a little medical advice and attention.

The irritation may proceed from plethora and distension, or from a weak or relaxed state of the constitution. If from the former, venesection and gentle laxatives will prove the best course we can pursue: if from the latter, a reclined position, easy intestinal evacuations, and such sedatives as may sit most pleasantly on the stomach, and produce least disturbance to the head.

### SPECIES III.

## LEUCORRHŒA SENESCENTIUM.

### Whites of advanced Life.

THE DISCHARGE THIN, ACRID, FREQUENTLY EXCORIATING  
AND FETID.

GEN. II.  
SPEC. III.  
Often connected with a morbid state of the uterus; especially cancer and a polypous fungus. Sometimes depends upon irritability of the uterus alone. Striking case in exemplification.

THIS is usually, but not always, connected with a morbid state of the uterus. It commonly shows itself on the cessation of the menses: and is often chronic and obstinate.

The more common diseases of the uterus with which the discharge is combined are an incipient cancer, or a polypous fungus. But I have occasionally met with it unconnected with either, and apparently dependent upon a peculiar and chronic irritability of the uterus, or rather perhaps of those glands which secrete the fluid that is poured forth during the act of sexual intercourse. A lady about forty years of age, not long ago applied to me, who had for more than a twelvemonth been labouring under a very distressing case of this kind. She had been married from an early period of life, but had never been

pregnant. Her general health was good, her temper easy, her imagination peculiarly warm and vivid. She had no local pain, and had ceased to menstruate at the age of about thirty-eight. The discharge at the time I first saw her consisted of at least from a quarter to half-a-pint daily;—thick, slimy, brownish, and highly offensive. Every external and internal remedy that could be thought of appeared to be of only temporary avail, and sometimes of no avail whatever, though she certainly derived relief from injections of the punica *Granatum*, with a fourth part port wine, which for some time checked the discharge, and diminished the fetor. In the mean time, the general strength was preyed upon, the loins became full of pain, the appetite failed, and the sleep was disturbed. Accidental circumstances compelled her, even in this debilitated state, to undertake a voyage to India. During its progress she suffered severely from sea-sickness; but the change hereby produced, or effected by the warmth of the climate, proved peculiarly salutary: for she gradually lost the complaint, and recovered her usual health.

Emetics, change of climate, and the tonic plan already recommended under the first species, seem, hence, to be the best course we can pursue in the species before us.

GEN. II.  
SPEC. III.  
Leucor-  
rhœa se-  
nescentium.  
Whites of  
advanced  
life.

General  
plan of  
treatment.

## GENUS III.

## BLENORRHŒA.

**Gonorrhœa.**

MUCULENT DISCHARGE FROM THE URETHRA, OR VAGINA;  
 GENERALLY WITH LOCAL IRRITATION AND DYSURY;  
 NOT DISAPPEARING DURING MENSTRUATION.

GEN. III.  
 Origin of  
 generic  
 term.  
 Synonyms.  
 Unsettled  
 use of the  
 term  
 gonorrhœa.

BLENORRHŒA is a Greek compound of modern writers, derived from *βλεννᾶ*, "mucus," and *ῥέω*, "to flow." Sauvages, and after him Cullen, have employed gonorrhœa from *γόνος*, "semen," and *ῥέω*, as a common term for this and SPERMORRHŒA constituting the ensuing genus, and consisting in an evacuation of semen. Cullen, indeed, has extended the term still further in his First Lines, and hence morbid secretion of mucus, all kinds of venereal contagion, and seminal flux, are equally arranged as species of the same generic disease; and this too under a word which imports the last alone. While, to add to the confusion, this very word, in its vulgar sense, is restrained to venereal contagion, which, in its strict meaning, that of seminal flux, it signifies just as much as it does abortion or stone in the bladder. It is high time to make a distinction, and to divide the list of Sauvages into two genera. Blenorrhœa has, indeed, been already employed of late by various writers to denote the first of these genera, and there is no necessity for changing the term.

The genus under Müller \*, is subdivided into numer-

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\* Müller, Medic. Wochenblatt, 1784. N. 51, plures species.

ous species: but the three following include the whole that fairly belong to it:

- |                         |                          |  |
|-------------------------|--------------------------|--|
| 1. BLENORRHOEA SIMPLEX. | SIMPLE URETHRAL RUNNING. | GEN. III.<br>Blenorrhœa.<br>Gonorrhœa. |
| 2. ————— LUODES.        | CLAP.                    |  |
| 3. ————— CHRONICA.      | GLEET.                   |  |

## SPECIES I.

### BLENORRHOEA SIMPLEX.

#### Simple Urethral Running.

SIMPLE INCREASED SECRETION FROM THE MUCOUS GLANDS OF THE URETHRA.

THIS definition is given in the words of Dr. Fordyce, and is sufficiently clear and expressive. In effect, the efflux proceeds from mere local irritation, unaccompanied by contagion, or virulence of any kind, and is chiefly found in persons in whom the affected organ is in a state of debility; the occasional causes of irritation being venereal excess, too large an indulgence in spirituous liquors, cold, topical inflammation, too frequent purging, violent exercise on horse-back, to which various authors add transferred rheumatic action \*; and occasionally, according to Mr. John Hunter, transferred irritation of the teeth †.

The matter discharged is whitish and mild, producing no excoriation, pain in micturition, or other disquiet.

\* De Plaigne, Journ de Med. Tom. LXXIV.

Richter, Chir. Bibl. B. IV. p. 508.

Ponteau, Œuvres Posthumes. I.

† Natural History of the Teeth.



GEN. III.  
SPEC. I.  
Blenorrhœa  
simplex.  
Simple  
urethral  
running.

It is the mild gonorrhœa of many writers, the gonorrhœa *pura* of Dr. Cullen; and usually yields without difficulty to rest, emollient injections, and very gentle and cooling purgatives.

## SPECIES II.

### BLÉNORRHŒA LUODES.

Clap.

MUCULENT DISCHARGE FROM THE URETHRA OR VAGINA, INTERMIXED WITH SPECIFIC VIRUS: BURNING PAIN IN MICTURITION: PRODUCED BY IMPURE COITION: INFECTIOUS.

GEN. III.  
SPEC. II.  
Commonly  
called  
virulent or  
malignant  
gonorrhœa.  
Once sup-  
posed to be  
an effect of  
syphilis.  
How far it  
coincides  
with syphi-  
lis.

THIS is a disorder of far greater mischief and violence than the preceding, and in contradistinction to it has been very generally denominated the virulent or malignant gonorrhœa. It is the gonorrhœa *impura* of Cullen.

The disease was for many years supposed to be a local effect of that poison, which when communicated to the system, produces syphilis. It is in truth received in the same manner, and by the same organs—its medium of conveyance being that of cohabitation with an infected person. We are chiefly indebted to Mr. John Hunter for having pointed out the distinction: and there is now scarcely an individual who has any doubt upon the subject, though there are several who conjecture that it has been derived from the syphilitic venom changed and softened in its virulence by an introduction into different constitutions. These conjectures are harmless, but they have little ground for support. That it is a disease specifically different from syphilis, is clear from the following facts. Its appearance did not commence till more than a hundred years after that of syphilis; it will con-

Distinctive  
symptoms.

tinue for months without any syphilitic symptoms, which are rarely, indeed, found connected with it; and where such symptoms have shown themselves, there has been full evidence of a new and different infection or strong ground for suspicion: the matter of chancre, the pathognomic symptom of syphilis, when introduced into the urethra has been found not to produce clap, and the matter of clap inserted under the skin, has been proved not to produce syphilis: the common course of mercury which is the only specific cure for the latter, is a very inconvenient, and dilatory way of treating the former; while the local plan by which the former is conquered with great speed and ease, produces no effect on the latter.

GEN. III.  
SPEC. II.  
Blenor-  
rhœa  
luodes.  
Clap.

Some of these facts were known to physiologists and reasoned from even before the time of Mr. John Hunter; and hence Baglivi contended that virulent gonorrhœa, as it was then called, may be produced by other acrimonies than the syphilitic\*, while Zeller, towards the close of the seventeenth century affirmed, that it may originate in either sex without contact †: and Stoll in the middle of the eighteenth, that it proceeds from various causes of which syphilitic contagion is one ‡.

Some of  
these dis-  
tinctions  
known and  
acted upon  
before the  
time of  
J. Hunter.

It is not easy to account for the primary appearance of this or of any other specific poison: but we see daily that most, perhaps all, mucous membranes, under a state of some peculiar morbid action, have a tendency to secrete a virulent and even contagious material of some kind or other; the particles of which are in some instances highly volatile, and capable of communicating their specific effect to organs of a like kind; and of propagating their power by assimilation, after having been diffused to some distance through the atmosphere, which does not at all times readily dissolve them; though, agreeably to a general law we have formerly pointed out, the more

Pathology.

\* De Fibrâ Motice, &c.

† Diss. de Gonorrhœâ virulentâ in utroque sexû, Tubing. 1700.

‡ Prælect. p. 104.

GEN. III.  
SPEC. II.  
Blenorrhœa  
luodes.  
Clap.

Compared  
with the  
discharge  
from dys-  
entery ;

canine  
catarrh :  
glanders :  
farcy :

purulent  
ophthalmia.

Leucorrhœa.

Clap has  
specific  
symptoms  
and a spe-  
cific virus.  
Symptoms  
described.

readily, the purer the constitution of the atmosphere \*. We have a manifest proof of this in the muculent discharge of dysentery, in canine catarrh or the muculent affection in the nostrils of dogs, which is vulgarly called distemper, and in the glanders, possibly also in the farcy, of horses. And although that species of catarrh which we name influenza, is probably a miasm rather dependent on some intemperament of the atmosphere itself in its origin, than on the temperament of the individual who suffers from it; yet this also becomes a contagion in its progress, and is communicable in consequence of such new property, from individual to individual, after a removal into fresh and very remote atmospheres by travelling †: whilst nothing can be more highly contagious than the discharge from the mucous glands of the tunica conjunctiva in purulent ophthalmia, although possibly the matter of this contagion dissolves rapidly in the atmosphere, or is not sufficiently volatile to float in it; whence a direct contact is necessary for the production of its effect.

In like manner, leucorrhœa, as we have already observed, has sometimes seemed to be contagious; for I have occasionally found a kind of blenorrhœa produced in men, accompanied with a slight pain in the urethra, and some difficulty in making water, upon cohabitation with women who upon inspection, had no marks whatever of luodic blenorrhœa, or clap; and, in some instances, indeed, were wives and matrons of unimpeachable character.

The disease before us, however, has symptoms peculiar to itself, and undoubtedly depends upon a specific virus. The chief of these symptoms are described in the definition. They are generally preceded by a troublesome itching in the glans penis, and a general sense of soreness up the whole course of the urethra: soon after which the discharge appears, on pressing the

\* Vol. II. Sect. 9. p. 76.

† See Catarrhus epidemicus of this work, Vol. II. p. 441, 442.

glands, in the form of a whitish pus oozing from its orifice. In a day or two it increases in quantity, and becomes yellowish; and, as the inflammation augments, and the disorder grows more virulent, the yellow is converted into a greenish hue, and the matter loses its purulent appearance, and is thinner and more irritant. The burning or scalding pain that takes place on making water, is usually seated about half an inch within the orifice of the urethra, at which part the passage feels peculiarly straitened or contracted, whence the urine flows in a small, interrupted stream: the lips of the urethra are thickened and inflamed, and a general tension is felt up the course of the penis. This last symptom is sometimes extremely violent, and accompanied with involuntary erections; at which time, as the frænum, in consequence of the inflammation, has lost its freedom of motion, the penis is incurvated with intolerable pain. It is to this state of the penis, in which it bears some resemblance to a hard, twisted cord, that the French have given the name of CHORDEE. Under these circumstances we often meet with a troublesome phimosis, either of the strangulating, or incarcerating kind; in consequence of the increased spread of the inflammation. Sometimes it extends to one or both groins, in which case the glands swell and buboes are often formed; sometimes it reaches to the bladder, the surface of which pours forth a cheesy or wheyey fluid instead of its proper lubricous secretion, which is communicated to the urine; and sometimes the testes participate in the inflammation, become swollen and painful, and excite a considerable degree of fever.

In women, the chief seat of affection is the vagina; but as this is a less sensible part than the urethra, the pain is seldom so pungent, except when the meatus urinarius and the nymphæ associate and participate in the inflammation.

The disease appears at very different intervals after infection, according to the irritability of the constitution. The usual time is about the fourth or fifth day. But it has shown itself within the first twenty-four hours,

GEN. III.  
SPEC. II.  
Blenor-  
rhœa  
luodes.  
Clap.

Disease less  
severe in  
women than  
in men and  
why.

Interval  
from the  
time of in-  
fection.



GEN. III.  
SPEC. II.  
Blenor-  
rhœa  
luodes.  
Clap.

and has sometimes continued dormant for a fortnight. Domeier lays down the time from the fourth to the fourteenth day \*. Plenciz fixes it after the tenth †. Sometimes by the violence of the irritation the secretion is absorbed as fast as it is effused; so that only a very small discharge takes place, while the other symptoms are peculiarly exasperated. To this state of the disease some practitioners have applied the very absurd name of *gonorrhœa sicca*.

Gonorrhœa  
sicca.

Puriform  
fluid  
thrown  
forth, does  
not proceed  
from an  
ulcer:

It was at one time imagined that the puriform fluid which is usually poured forth in considerable abundance, proceeds from an ulcer in the urethra; but it is now well known, as we have already had occasion to observe frequently, that it is not necessary for an ulcer or an abscess to exist for the formation of pus, and the dissection of persons who have died while labouring under this disease, have sufficiently shown that the secretion is thrown forth from the internal membrane of the urethra, chiefly at the lacunæ, without the least appearance of ulceration, or even, in most instances, of excoriation.

but is se-  
creted from  
the internal  
membrane  
of the ure-  
thra.

Curative  
process  
simple in  
the present  
day, and  
why.

The cure, in the present day, is simple; for the venereal clap, like the venereal pox, appears to have lost much of that virulence and severity of character, by passing from one constitution to another, which it evinced on its first detection. Rest, diluent drinks, and an antiphlogistic regimen will often effect a cure alone. But it may be expedited by cooling laxatives, and topical applications.

Two classes  
of reme-  
dies:  
stimulant  
and seda-  
tive:  
both used  
generally  
and locally.  
Mode of  
action of  
both.

The remedies employed are of two kinds, and of very opposite characters; stimulant, and sedative. Both, also, are used generally and locally; with a view of taking off the irritation indirectly by exciting a new action; or directly, by rendering the parts affected torpid to the existing action, and thus allowing it to die away of its own accord. Many of these medicines, indeed, as well the local as the general, were, at one time,

\* Fragmente über die Erkenntnis venerischer Krankheiten. Hanov. 1790.

† Acta, et Observaciones, Med. p. 139.

supposed to be natural antidotes, and to cure by a specific power: an idea, however, which has been long banished from the minds of most practitioners.

The general sedatives that have hitherto been principally employed are opium, conium, nitre, oily emulsions, and mucilages. The first has often succeeded, but with considerable and very unnecessary inconvenience to the constitution: the others are not much to be depended upon. They may have co-operated with a rigidly reducent diet, but have seldom answered alone.

Employed locally, some of them, and particularly opium, have proved far more beneficial. The best form of this last is that of an injection rendered somewhat viscid by oil or mucilage, both which have a greater chance of acting as demulcents, and sheathing, or inviscating the acrimonious corpuscles in this case, than on the irritable surface of the lungs in catarrhs, and asthma, when given by the mouth.

The stimulant process has, however, been found to answer so much more rapidly and more effectually, that it has almost superseded the use of sedatives in modern practice.

Formerly this process, also, was employed generally, and it was supposed, and, in many cases, sufficiently ascertained, that by strongly irritating some other part the morbid excitement of the urethra would subside, and the organ have time to recover its natural action. And hence the intestines were daily stimulated by cathartics, as neutral salts, mercury, and colocynth, which last was at one time regarded as a specific; or terebinthines, as camphor, balsam of copaiba, and turpentine itself. And sometimes the bladder was treated in the same manner, with diuretics of all kinds, and especially with cantharides.

This plan is still continued in many parts of the East, and particularly in Bengal and Java; where, as we are informed by Mr. Crawford, the common remedy, and one to which the disease, in those hot regions, yields very easily is that of cubebs, the piper *cubeba* of Lin-

GÉN. III.  
SPEC. II.  
Blenor-  
rhœa  
Inodes.  
Clap.  
General  
sedatives.

Action  
when em-  
ployed  
locally.

Stimulant  
process.

Stimulants  
employed  
generally,  
how sup-  
posed to  
operate.

Still con-  
tinued in  
the East.

Cubebs.

GEN. III. néus. This pepper, well pounded, is exhibited in a  
 SPEC. II. little water, five or six times a day, in the quantity of a  
 Blenor- dessert-spoonful, or about three drachms, as well in the  
 rhœa ensuing as in the present species, during which time all  
 luodes. heating aliments are to be carefully abstained from. The  
 Clap. cure, we are told, is entirely completed in two or three  
 days, the ardor urinæ first ceasing, and the discharge  
 again becomes viscid. A slight diarrhœa is sometimes  
 produced, with a flushing in the face, and a sense of  
 heat in the palms of the hands, and the soles of the feet.  
 In a few instances, Mr. Crawford tells us, inflamed  
 testicles have supervened, an affection which yields easily  
 to the common treatment \*.

Stimulants  
 employed  
 locally.

Metallic  
 salts.

Solution of  
 alum.

Sulphate of  
 zinc with  
 bole arme-  
 nic.

There is no necessity, however, for subjecting the constitution to so severe a discipline: for the stimulant process, and particularly that of astringent stimulants, when employed locally, succeeds ordinarily in a few days without any trouble. These consist chiefly of metallic salts in solution, as the muriate, and sub-muriate of mercury, the former in the proportion of three or four grains to eight ounces of water:—sulphate of zinc, sulphate of copper, ammoniacal copper, and sub-acetated solution of lead. The astringent property of most of these, under due management, instead of being found mischievous, gives a check to the morbid secretion, at the same time that it acts as a direct tonic and rapidly restores the irritated mouths of the exhalants to their healthy and proper action; and this, too, without the inconvenience of a secondary inflammation. A slight solution of alum alone, indeed, in the proportion of one or two grains to an ounce of water, has, for this purpose, been often employed with sufficient efficacy; though the present author has reason to prefer the sulphate of zinc, which he has usually combined with bole armenic in the proportion of one scruple of the former and two of the latter to half a pint of water. And he can venture to say that

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\* Account of the Piper Cubeba, &c. Edinb. Med. and Journ. No. LIII.  
 p. 32.

through a pretty extensive course of practice, for upwards of thirty years, he has never known this composition to fail; and has never perceived it produce any of the inconveniences of stricture or swelled testicle which were so much but so groundlessly apprehended when the stimulating and astringent practice was first introduced.

GEN. III.  
SPEC. II.  
Blenor-  
rhœa  
luodes.  
Clap.

The addition of the bole may to some practitioners appear trifling, but it adds to the power of the zinc, probably by giving an increased body to the solution without diminishing its stimulant effect, which would certainly follow by using oil or mucilage in its stead. The sulphate of copper is more irritating than that of zinc, and, in a strong solution, is more likely to produce inflammation; and it is on this account chiefly that the author has confined himself to the latter. It is in effect, by an analogous practice, that several modifications of purulent ophthalmia, and particularly that of infancy, is most successfully subdued, as we observed when treating of this disease.

Sulphate of  
copper.

It is almost unnecessary to add that the utmost cleanliness by frequent washing should be maintained from the first appearance of the disease.

Cleanliness.

Where the complaint, however, is improperly treated with stimulants, and particularly astringent stimulants, or where it has continued too long before application for medical assistance, the whole range of the urethra, or some particular parts of it, are apt to become so irritable as to excite spasmodic contractions, which commonly pass under the name of strictures, without being so in reality; and, as we have already observed, this irritation in some cases, extends to the interior surface of the bladder, and even thickens it. We have often had occasion to remark that in fibrous structures and canals the most sensible parts are their extremities; and this remark is particularly applicable to blenorrhœa, for the portions of the urethra which suffer most from irritation are the interior membrane of the glans and the prostrate, particularly the latter, in consequence of its direct connexion with the bladder as well as the urethral canal.

Spasmodic  
constrictions, distinct from, though vulgarly called strictures.  
Their origin accounted for, and remote action.



GEN. III.  
SPEC. II.  
Blenor-  
rhœa  
Duodes.  
Clap.  
Commonly  
commence  
in the pros-  
trate, and  
extend to  
other parts.  
This rule  
occasion-  
ally re-  
versed.

Bougie how  
far avail-  
able, and  
when to be  
used.

On this account, when a patient once labours under spasmodic constrictions from the disease before us, whatever other parts these may exist in, the introduction of a bougie will be almost sure to prove that there is also a constriction in the prostrate. Generally speaking it will be found to originate here, and to occur in other parts of the canal from sympathy. But the case will often be reversed, and while the irritation originates in some other part, or in the bladder, it is by sympathy with these that the prostrate itself is affected. Mr. Abernethy has pointed out this double source of spasmodic constriction in the prostrate, in the clearest manner possible\*; and the remarks he has offered upon the propriety of employing or withholding the bougie as an instrument of cure cannot be too deeply imprinted on every student's mind: the general principle of which is to persevere in its use wherever it appears to blunt the sensibility; and to pass it as high up the urethra as can be accomplished with this effect, if possible indeed through the prostrate into the bladder; but in every instance to desist where a second or third trial of the instrument gives more pain than the first, or to content ourselves with passing it as high as can be done without any such symptoms of increased irritation, and there stopping short: and only making an occasional trial when we have reason to hope that the morbid sensibility has still further subsided.

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\* Surgical Observations on Diseases of the Urethra, p. 194, 8vo. 1810,

## SPECIES III.

## BLENORRHOEA CHRONICA.

## Gleet.

SLIMY DISCHARGE FROM THE MUCOUS GLANDS OF THE URETHRA, WITHOUT SPECIFIC VENOM OR INFECTION : SLIGHTLY IRRITATING : CHRONIC.

THIS species is a frequent sequel upon a clap that has been ill-managed, or has lasted long, and produced an obstinate local debility. But it exists also independently of clap, and is occasioned by strains, excess of venery, and other causes of weakness. The discharge is, for the most part, a bland and slimy mucus not accompanied with inflammation, apparently proceeding from a morbid relaxation of the mucous glands of the urethra, and at times, like other discharges from debilitated organs, accompanied with and kept up by irritation, and especially irritation produced by a stricture in the urethra properly so called, or a diseased state of the prostrate gland.

In common cases, the disease yields to the local tonics and astringents recommended under the preceding species, but it is sometimes peculiarly irritable, and bids defiance to all the ingenuity of the medical art. A Castro gives an instance of its having continued for eighteen years\*.

The stimulants ordinarily employed have consisted of copaiba or some terebinthinate or resinous balsam in the form of injection ; tincture of ipecacuanha, as recommended by Schwediauer ; infusion of cantharides, a favourite remedy with Bartholin ; or a blister applied to the urethra, as advised by Mr. John Hunter and several other writers.

GEN. III.  
SPEC. III.  
May be a sequel of the preceding or a primary disease.  
Nature of the discharge.

Generally yields to local means with ease : but sometimes peculiarly intractable.  
Ordinary stimulants.

\* De Morb. Mul. p. 68.

GEN. III.  
SPEC. III.  
Blenor-  
rhœa  
chronica.  
Gleet.  
Bougies of  
advantage.  
Sometimes  
armed with  
irritants;  
but this  
demands  
caution.

If great ir-  
ritation suc-  
ceed how to  
be treated.

In women  
gleet some-  
times mis-  
taken for  
leucorrhœa.

The bougie may here be used, for the most part more fearlessly than in the preceding species. Its own simple stimulus, if employed regularly once or twice a-day, has often proved sufficient: and where this fails it may be rendered more active by being smeared with turpentine, mercurial ointment, or camphorated liniment; or armed with nitrate of silver, where there are strictures that require it. Even in this species, however, it is a valuable remark of Mr. John Hunter, that, before we have recourse to any powerful acuant, we should well weigh the degree of irritability of the patient's constitution: for we may otherwise run a risk of exciting a violent local inflammation, or of extending the irritation to the testes or the bladder. Should such an issue unfortunately occur, one of the most salutary injections we can employ is a solution of the extract of hyoscyamus in water. Even in chordees, which resisted the influence of opium, Mr. Bell asserts that he has found this medicine advantageous in the quantity of from one to three grains at a time, and repeated three times a-day or oftener. Or we may have recourse to a warm hemlock poultice, applied every night, and made sufficiently large to cover the whole of the perinæum, testes, and penis. I have known this succeed in taking off an habitual irritation, and with it effectually suppressing the discharge, on the third application, in two instances of more than a twelvemonth's standing: and this after stimulants of all kinds, and narcotics of many kinds, and particularly opium, had been tried in succession. The leaves were here employed in a fresh state. Nisbet gives an instance of cure, produced by a fresh infection: but this is not a remedy to be recommended either medically or morally.

In women this disease is often mistaken for leucorrhœa; we have pointed out the distinctive character under the last species. Yet the mistake is not of essential consequence, as the same treatment will often effect a cure in both. As the vagina, however, is less irritable than the urethra, gleet in females is a less frequent and a less troublesome complaint than in males.

## GENUS IV.

## SPERMORRHŒA.

**Seminal Flux.**

INVOLUNTARY EMISSION OF SEMINAL FLUID WITHOUT  
COPULATION.

THE generic name is derived from *σπείρω*, “sero” “semino;” whence aspermus, “void of seed,” gymnospermus, “having the seed naked,”—a term well known in botany; and hence also numerous other derivatives of the same kind. Gonorrhœa, which is a direct synonym, would have been retained as the name for this genus, but from the confused signification in which it has been employed by Sauvages and Cullen; and from its being usually, though most improperly applied in the present day to blenorrhœa *luodes*.

The genus offers two varieties as follow:

1. SPERMORRHŒA ENTONICA. ENTONIC SEMINAL FLUX.
2. ————— ATONICA. ATONIC SEMINAL FLUX.

GEN. IV.  
Origin of  
the generic  
name.

Why em-  
ployed in-  
stead of  
gonorrhœa.



## SPECIES I.

## SPERMORRHŒA ENTONICA.

*Entonic Seminal Flux.*

INVOLUNTARY EMISSION OF PROPER SEMEN WITH ERECTION; MOSTLY FROM AN INDULGENCE OF LIBIDINOUS IDEAS.

GEN. IV.  
SPEC. I.

Necessity  
of an habitual sub-  
jugation of  
the pas-  
sions.

Effects of  
libidinous  
indulgence.

Sometimes  
originates  
from a cor-  
poreal  
cause.

In such  
case how to  
be treated.

THE usual cause is assigned in the definition, and it very strikingly points out the influence which the mind bears upon the body, and the necessity of subjecting the passions to the discipline of a chaste and virtuous deportment; since, as there is no passion more debasing than that of gross lust, there is none more mischievous to the general health of the body. It leads the besotted slave straight forward to every other sensuality, and, by becoming at length an established and chronic disease, stupefies the mind, debilitates the body, and is apt to terminate in hectic fever and tabes.

This affection sometimes originates in the body itself: in a local and urgent erethism, produced, as Forestus conjectures\*, by a superabundant secretion of seminal fluid in a constitution of entonic health and vigour. And, as in the former case, the body is to be chastised through the mind, in the present the mind is to be chastised through the body: particularly by purgatives and venesection, a low diet and severe exercise. If, however, the patient be single, as is commonly the case, the pleasantest as well as the most effectual remedy is to be sought for in marriage.

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\* Lib. xxvi. Obs. II.

## SPECIES II.

## SPERMORRHŒA ATONICA.

*Atonic Seminal Flux.*

INVOLUNTARY EMISSION OF A DILUTE AND NEARLY PEL-  
LUCID SEMINAL FLUID; WITH LIBIDINOUS PROPENSITY  
BUT WITHOUT ERECTION.

OF this species Sauvages gives us two curious examples: one from Deidier, in which the patient was an exemplary monk, who shrunk with horror at the idea of this involuntary self-pollution, as he regarded it: the other a case in his own practice, in which the patient, a most religious young female, was, as he affirms, driven almost to madness under the same erroneous contemplation of the disease. From his having included a female under this genus, it should seem that Sauvages inclined to the theory of epigenesis, or that which supposes the male and female to contribute equally a seminal fluid in the act of procreation. It is probable that some local irritation is the usual cause. Professor Deidier himself suspected this in the first of the above cases; and referred it rather to a calculus in the bladder, sympathetically affecting the prostrate gland, than to any idiopathic disease of the vesiculæ seminales, or the testes. The pious monk found himself most relieved by scourging his legs: a blister applied to the perinæum would probably have relieved him still more effectually. The fluid is a thin degenerate secretion, apparently from the vesiculæ seminales, rather than semen itself. It is sometimes found intermixed with blood; and in this case we have the further irritation of a wound or ruptured vessel. The most common cause of this miserable disorder is a previous

GEN. IV.  
SPEC. II.  
Singular ex-  
amples  
from  
Sauvages.

Nature of  
the fluid  
discharged.  
Ordinary  
cause.

GEN. IV.  
SPEC. II.  
Spermor-  
rhœa  
entonica.  
Entonic  
seminal  
flux,  
Medical  
treatment.

life of unrestrained concupiscence: and under this debility, hereby produced, the morbid discharge is peculiarly apt to flow upon the mere muscular excitement that takes place on evacuating the rectum; and hence follows hard upon a stool\*.

A cure should be attempted by the daily use of a bidet of cold sea-water, or of early bathing in the sea, and the internal use of metallic tonics. The bowels should be kept lax but the warm and irritating purgatives should be carefully abstained from. Blistering the perinæum, or making a seton in it has occasionally been found serviceable: as has also a local use of electricity.

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\* Art. Med. Berol. Dec. I. Vol. IV. p. 70.

Wichmann De Pollutione &c. Goett. 1712.

## GENUS V.

## G A L A C T I A.

**Mislactation.**

## MORBID FLOW OR DEFICIENCY OF MILK.

THIS includes the greater part of those affections, treated of by Dioscorides, under the name of sparganosis, which, however, in his arrangement embraced, as we observed under PHLEGMONE MAMMÆ\*, many complaints that have little or no connection with each other, and particularly one of the species of BUCNEMIA, or TUMID-LEG: so that it has been necessary to break up the division and allot to its different members their proper positions.

GALACTIA is a Greek term, from γάλα, "lac," whence γαλάκτικος, "lacteus." It occurs in Linnéus and Vogel for the genus now before us, which by Sauvages and Sagar is written galactirrhœa, literally "milk-flux," in a morbid sense of the term. The author has preferred GALACTIA as more comprehensive than galactirrhœa, so as to allow the idea of a depraved or defective, as well as of a superabundant secretion of milk: all which are equally entitled to be comprized under one common head, as excess, deficiency, or other irregularity of arterial action in fever. Hitherto, however, from an opposite fault to that of Dioscorides, these affections have been separated from each other by many nosologists, and carried to different heads, sometimes to different orders, and occasionally to

GEN. V.  
Synonyms.

Origin of  
the generic  
name.

Galacti-  
rrhœa of  
authors  
what:

how far  
differs from  
galactia.

---

\* Vol. II. p. 278.



GEN. V.  
Galactia.  
Mislacta-  
tion.

different classes; whence the student has had to hunt for them through every section of the nosological arrangement. It has already been necessary to make the same remark respecting many of the species of *PARAMENIA*; and various other instances will occur to us in the ensuing orders of the class we are now explaining.

The flow of milk may become a source of disease as being out of season, defective in quantity, vitiated in quality, transferred to an improper organ, and as discharged from the proper organ but in the male sex. These differences will furnish the present genus with five distinct species as follow:

1. *GALACTIA PRÆMATURA.* PREMATURE MILK-FLOW.
2. ——— DEFECTIVA. DEFICIENT MILK-FLOW.
3. ——— DEPRAVATA. DEPRAVED MILK-FLOW.
4. ——— ERRATICA. ERRATIC MILK-FLOW.
5. ——— VIRORUM. MILK-FLOW IN MALES.

## SPECIES I.

### GALACTIA PRÆMATURA.

#### Premature Milk-flow.

##### EFFLUX OF MILK DURING PREGNANCY.

GEN. V.  
SPEC. I.  
Physiolo-  
gical re-  
marks.

THE mammæ which maintain the closest sympathy with the ovaria, and uterus, and in most animals possessing them are placed in their direct vicinity, and which in truth are as much entitled to the character of a sexual organ as any organ of the entire frame, participate in the developement of the generative function from the first stimulus of puberty. It is then that the breasts assume a globose plumpness, and the catamenial flux commences: when pregnancy takes place, and the uterus

enlarges, the breasts exhibit a correspondent increase of swell; and when, shortly after child-birth, the lochial discharge ceases, and the uterus takes rest, the lacteal discharge is secreted and poured forth in immediate succession. The sympathy continues, however, even after this rest has commenced, for one of the most effectual means of increasing the flow of milk from the breasts is a slight excitement of the uterus as soon as it has recovered its tone: and hence the mother of an infant living with her husband, and herself in good health, makes a far better nurse and even requires a less stimulant regimen than a stranger brought from her own family and secluded from her husband's visits. Of this, indeed, many of the rudest and most barbarous nations, but who are not always inattentive to the voice of nature, have the fullest conviction: insomuch that the Scythians, according to Herodotus, and the Hottentots in our own day, irritate the vagina to increase the flow of milk in their cows and mares.

GEN. V.  
SPEC. I.  
Galactia  
præmatura.  
Premature  
milk-flow.  
Sympathy  
with the  
womb con-  
tinues after  
child-birth.  
Advantage  
of a wet-  
nurse living  
with her  
husband.

Illustrated.

It sometimes happens, however, that this stimulus of sympathy is carried to excess even during pregnancy, and that the lactiferous ducts of the mammæ secrete milk from the ultimate branches of the arteries sooner than it is wanted. If the quantity thus separated be small it is of no moment; but if it be considerable some degree of debility is usually produced with restlessness and pyrexia. And hence Galen observes, that a premature flow of milk indicates a weakly child\*; and the collections of medical curiosities contain various cases, in which it has appeared to be injurious†. Sauvages gives an instance in which a pint and a half was poured forth daily, as early as the fifth month. Where the constitution is peculiarly robust, even this may for some time be borne with as little mischief as menstruation during pregnancy:

How pro-  
duced pre-  
maturely.

Why pre-  
mature  
milk an in-  
dication of  
a weakly  
child.

\* *Fragm. ex Aphor. Rab. Mois. p. 34.*

† *Act. Nat. Cur. Vol. iv. Obs. 66.*

GEN. V.  
SPEC. I.  
Galactia  
præmatura.  
Premature  
milk-flow.  
Medical  
treatment.

but in ordinary cases the system must be weakened by so excessive and unprofitable a discharge. There is an instance noticed in the volume of Nosology in which a pint and a half was poured forth daily at the fifth month.

The morbid irritation, however, may generally be taken off by venesection, and, if this should not succeed, by a few doses of aperient medicines, which have the double advantage of lowering the action in the affected organ, and exciting a new and revulsive action in an organ that is usually more manageable.

This pre-  
maturity  
sometimes  
in young  
virgins.

It has sometimes happened that a like precocity has occurred in young virgins, and that these also have secreted and discharged milk from the proper organ. In many cases this has occurred as a substitute for the catamenial flux which has been retained or suppressed at the time\*; but more generally it has proceeded from entonic plethora, or a morbid erethism of the sexual organs at the period of puberty†; and is to be removed by a reducent regimen, bleeding and purgatives, as just pointed out.

Cause, and  
means of  
removal.

Milk-flow  
in aged  
women who  
have ceased  
to bear  
children or  
menstruate.  
Illustrated.

On the other hand we have occasional instances of a supply of milk, in women considerably advanced in life, and who have long ceased to bear children, and even to menstruate. Thus a woman of sixty-eight, is stated by Dr. Stack, in the Philosophical Transactions, to have given suck to two of her grand-children‡; and another of eighty, in a Swedish Journal, is said to have performed the same office§. In most of these cases the antiquated nurses have consisted of married women, who had many years before reared families of their own, and whose lactiferous organs were therefore more easily re-excited to the renewed action, than if they had never

Action ac-  
counted for.

\* De la Corde, Ergo virgo, menstruis deficientibus, lac in mammis habere potest. Paris, 1580.

† Hippocr. Aph. Sect. v. § 39.

Vega, Comment. in Hippocr. Aph. v. § 39.

‡ Vol. xli, year 1739, 141.

§ See also Phil. Trans. Vol. ix, year 1674.

suckled, the cause has been some peculiar irritation originating in the radicles of the lactiferous ducts, or excited by a transfer of action from the uterus or ovaria in consequence of a cessation of the menses.

GEN. V.  
SPEC. I.  
Galactia  
præmatura.  
Premature  
milk-flow.  
Treatment.

## SPECIES II.

### GALACTIA DEFECTIVA.

#### Deficient Milk-flow.

##### INABILITY TO SUCKLE UPON CHILD-BIRTH.

THIS is the agalaxis or agalactatio of preceding nosologists; and may proceed from two causes, accompanied with symptoms producing the two following varieties:

- |                              |                          |
|------------------------------|--------------------------|
| α Atonica.                   | From want of secretion.  |
| Atonic inability to suckle.  |                          |
| ♂ Organica.                  | From imperfect nipple or |
| Organic inability to suckle. | other organic defect.    |

GEN. V.  
SPEC. II.  
The agalaxis or agalactatio of many writers.

To every feeling and considerate mother, inability to suckle is a serious evil: and, generally speaking, it is an evil of as great a magnitude to the mother herself as to the child; for a free secretion of milk prevents many present and not a few eventual mischiefs. The health of women during suckling is, in most instances, better than at any period of their lives. Their appetite is excellent, their sleep sound and refreshing, their spirits free, their temper cheerful. But to every conscientious mother there is, superadded to all this, a pleasurable feeling of a still higher and nobler kind: it is a sense of conscientiously discharging the maternal duty: it is the gratification of beholding the lovely babe to whom she has given birth saved from the cold caresses of a hireling to

Inability to suckle often as serious an evil to the mother as to the child: explained: affords health to the body and gratification to the mind.



GEN. V.  
SPEC. II.  
Galactia  
defectiva.  
Deficient  
milk-flow.

and pre-  
pares for  
health in  
advanced  
life.

Yet many  
cannot  
suckle,  
however  
desirous.

Sources of  
disqualifi-  
cation.

Some of  
these ca-  
pable of  
being re-  
medied.

lie in the warm embraces of her own bosom: to grow from the sweet fountain which she furnishes from her own veins, rich, ample, and untainted: to swell with the tender shrill that shoots through the heart at every little draught which is drawn away from her; to see the cheeks dimple and the eyes brighten, and the limbs play, and the features open; and to trace, in every fresh lineament, a softened image of herself or one dearer to her than herself. This is the luxury that awaits the mother, whose unseduced ear still listens to the voice of Nature, and estimates the endearments of domestic life at a higher value than the intoxicating charm of fashionable amusements and midnight revels. Though transported with the present, her comforts do not end with the present: for she has yet to look forward to a term of life in which, when those who have made a sacrifice of maternal duty at the altar of pleasure, are wasting with decline, trembling with palsy, or tormented with the dread of cancer, she will still enjoy the blessing of unbroken health, and sink as on a downy pillow into a tranquil old age.

But though these remarks apply to the greater number of those who, in the career of fashion, abstain from the duty of a mother, it by no means applies to all. There are many excellent mothers who would undergo the severest discipline of pain to accomplish this object, but after all are not able. There are some who from the want of a proper nipple, or perhaps the want or undevelopment of lactiferous ducts are naturally disqualified for the office: as there are others whose constitutional debility renders them incapable of secreting their milk in sufficient abundance, or with a sufficient elaboration for healthy food. And in all such cases it is expedient, wherever the means will allow, to seek carefully for the substitute of a foster-mother.

But let not the natural office be abandoned too soon, and particularly where the child is strong and hearty. If the nipple be at fault much may be done to remedy it. If it be buried in the breast it may often be drawn out by

exciting a vacuum with the ordinary glass tube invented for the purpose, if dexterously applied; or, which will often succeed better, by the suction of a woman who is well skilled in the art: or an artificial nipple may be employed if these do not succeed.

GEN. V.  
SPEC. II.  
Galactia  
defectiva.  
Deficient  
milk-flow.

And if the breasts be hard and lumpy, and a considerable degree of symptomatic fever supervene, the same kind of suction must be had recourse to twice a-day, while the breasts are kept in a constant state of relaxation by gentle friction with warm-oil, large cataplasms of bread and water, and a suspensory bandage of flannel passed under the arms and drawn as tight as may be borne without inconvenience.

Even where the milk is not very promising, either in respect to quantity or quality, let not the unhappy mother despair for the first week or two. As her own strength increases, the strength of the milk will often be found to increase also: the milk vessels will yield with more facility, and the symptomatic pain in the back will subside. Added to which the matrimonial excitement to which I have alluded in the preceding species, will in due time be called in to bear its beneficial part; and the woman who had a hopeless prospect before her may in due time reap the full harvest of her labours.

Milk sometimes flows after being despaired of, as the mother's strength returns.

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### SPECIES III.

## GALACTIA DEPRAVATA.

### Depraved Milk-flow.

#### EFFLUX OF A DILUTE OR VITIATED MILK.

HERE also we have two varieties:

α Serosa.

Serous Milk-flow.

Weakened by too large a proportion of serum.

GEN. V.  
SPEC. III.

GEN. V.  
SPEC. III.

♂ Contaminata.

Contaminated Milk-flow.

Deteriorated by intermix-  
ture with some foreign  
material.

α G. de-  
pravata  
serosa.  
Serous  
milk-flow.

To the FIRST VARIETY we have alluded under the preceding species: for it sometimes happens that milk, when deficient in quantity, is also of a more dilute quality than it ought to be. But more frequently, as local irritation is a result or concomitant of debility, there is in weakly habits a very large flow of a thin, slightly blue, and almost pellucid milk, containing little sugar, and still less cream. The properties of a sound woman's milk we have already given under CONSUMPTION, and to save an unnecessary repetition, the reader may turn to the passage, at his leisure, and compare it with the defective character before us\*.

Tonics, and a generous diet, afford in this case the best chance of success, and are often employed with full effect.

♂ G. de-  
pravata  
contami-  
nata.  
Contami-  
nated milk-  
flow.

Under the SECOND VARIETY the assimilation is imperfect, and the milk has the taste or smell of beer, or wine, or some other fluid that has been introduced into the stomach: proving that the digestive power is weak, and requires correction and invigoration. In other cases we have examples of black, green, or yellow milk: probably discoloured by an union with effused blood.

All violent exertions, whether of body or mind, and hence violent passion, as rage and terror, have a peculiar influence in changing the natural character of milk; and the depressing passions frequently drive it away entirely†. It is hence, of no small moment that a wet nurse be of an easy and even temper, and not disposed to mental disturbance.

\* Marasmus Phthisis, Vol. II. p. 775.

† Starch, Archiv. für Geburtshelfer. B. III. 12. B. II. p. 3.

## SPECIES IV.

## GALACTIA ERRATICA.

*Erratic Milk-flow.*

MILK TRANSFERRED TO, AND DISCHARGED OR ACCUMULATED AT SOME REMOTE ORGANS, OFTEN UNDER A DIFFERENT FORM.

LIKE the menstrual flux, there is scarcely an organ to which the flow of milk has not been transferred under different circumstances, or in different constitutions. And hence the author has adverted in the volume of Nosology to examples of its translation to the fauces, where it has been discharged in the form of a ptyalism: to the general surface of the mammæ, where it has been evacuated in the form of sweat: to the navel, where it has assumed an ichorous appearance: to the kidneys, which have thrown it off in an increased flow of urine: to the eyes, whence it has been discharged as a milky epiphora: to the veins, which it has overloaded, so as to demand the use of the lancet: and to the vagina, where it has excited a copious leucorrhœa. It is also said to be frequently translated to the thighs, so as to produce the disease we have already described under the name of BUCNEMIA SPARGANOSIS, but which is clearly unconnected with the state of the milk or of the breasts.

The causes are chiefly a sudden exposure of the breasts to cold; cold-water drunk improvidently when in a state of perspiration, spirituous potation, and sudden emotion of mind.

The irregular action is best subdued by gentle laxatives, diaphoretics, and perfect quiet in a warm bed.

GEN. V.  
SPEC. IV.

Has been transferred to almost every organ.

Fauces:

Surface of the breasts:

Navel:

Kidneys:

Eyes:

Vagina:

Causes.

Mode of treatment.



GEN. V.  
SPEC. IV.  
Galactia  
erratica.  
Erratic  
milk-flow.  
Treatment.  
Blood  
sometimes  
loaded with  
a milky ap-  
pearance.

Where ardent spirits have been the cause, the aperients should be more stimulant, and bleeding will often be necessary.

The blood itself, however, during the time of suckling is often loaded with milk from resorption, and evinces a milky appearance, as are likewise several of the fluids secreted from the blood: and hence, also one cause of many of the above peculiarities.

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## SPECIES V.

### GALACTIA VIRORUM.

#### *Milk-flow in Males.*

#### MILK SECRETED IN MALES AND DISCHARGED FROM THE PROPER EMUNCTORY.

GEN. V.  
SPEC. V.  
Has fre-  
quently oc-  
curred in  
different  
periods of  
life.

A MILKY serum, and sometimes genuine milk has been found to distil from the nipples of new-born infants, of both sexes, and sometimes from boys of a later age. But various authors, as Schölk, P. Borelli, and Lauremberg have given cases of genuine milk discharged in like manner by adult males; occasionally continuing for a long time; and, in some instances, enabling them to perform the office of nurses. In the Commentaries of the St. Petersburg Academy\*, a flow of milk from the breasts of males, is said to be very common in Russia: and Blumenbach has noticed the same peculiarity in the males of various other mammals†. Among men, indeed, the discharge appears occasionally to have occurred even in

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\* Tom. III. p. 278.

† Hanoversich Magazin, 1787.

advanced life; for Paullini gives the case of a man, who was able to suckle at the age of sixty\*.

Why man should, in every instance, possess the same organization as women for secreting and conveying milk, is among the many mysteries of physiology that yet remain to be solved. But as there is little or no sympathy between the mammæ in man and any of the proper organs of generation, as in women, we are at no loss to account for their general sterility and want of action. Occasionally, however, the lacteal glands in man, or the minute tubes which emerge from them are more than ordinarily irritable, and throw forth some portion of their proper fluid. And if this irritation be encouraged and supported there is no reason why such persons may not become wet-nurses as well as females. And hence, Dr. Parr inquires, with some degree of quaintness, whether this organization is allotted to both sexes, in order that "in cases of necessity men should be able to supply the office of the woman?" Under these circumstances, the discharge, though unquestionably a deviation from the ordinary law of nature, can scarcely be regarded as a disease.

GEN. V.  
SPEC. V.  
Galactia

Virorum.  
Milk-flow  
in males.

Why it does  
not occur  
generally.

and ac-  
counted for  
where it  
does occur.

---

\* Cent. II. Obs. 93.

Schacker, Diss. de lacte Virorum et Virginum.

## CLASS V.

## GENETICA.

## ORDER II.

## ORGASTICA.

**Diseases affecting the Orgasm.**

ORGANIC OR CONSTITUTIONAL INFIRMITY, DISORDERING  
THE POWER, OR THE DESIRE OF PROCREATING.

CLASS V.  
ORDER II.  
Origin of  
ordinal  
term.

THE ordinal term ORGASTICA, is derived from ὀργάω “ap-  
peto impatienter; proprie de animantibus dicitur, quæ  
turgent libidine. *Scapul.* Orgasmus is, hence, used by  
most writers for salacity in general; though by Linnéus  
it is employed in a very different sense, being restrained  
to *subsultus arteriarum*.

The following are the genera which appertain to this  
order:

- |                |                               |
|----------------|-------------------------------|
| I. CHLOROSIS.  | GREEN-SICKNESS.               |
| II. PRÆOTIA.   | GENITAL PRECOCITY.            |
| III. LAGNESIS. | LUST.                         |
| IV. AGENESIA.  | MALE STERILITY.               |
| V. APHORIA.    | FEMALE STERILITY. BARRENNESS. |
| VI. ÆDOPTOSIS. | GENITAL PROLAPSE.             |

## GENUS I.

## CHLOROSIS.

## Green-Sickness.

PALE, CHLORID COMPLEXION; LANGUOR; LISTLESSNESS;  
DEPRAVED APPETITE AND DIGESTION: THE SEXUAL  
SECRECTIONS DEPRAVED OR INERT, ESPECIALLY AT  
THEIR COMMENCEMENT.

CHLOROSIS is a derivative from *χλόα* or *χλόη* “herba virens;” whence, among the Greeks, *χλώρασμα* and *χλωρίαισις* “viror,” “pallor;” evidently applied to the disease, like our own term green-sickness, from the pale, lurid, and greenish cast of the skin.

GEN. I.  
Origin of  
generic  
term.

The causes of this disorder are numerous: one of the most frequent is menstruation, retained or suppressed catamenia; another is excessive menstruation; a third, inability of obtaining the object of desire, in popular terms love-sickness: a fourth is dyspepsy, or any other source of general debility about the age of puberty, by which the natural developement of the sexual system and the energy of its secretions is at this time interfered with. Dr. Parr makes it a question whether love-sickness or an ungratified longing for an object of desire is ever a cause; but the examples are too numerous to give countenance to any doubts upon the subject\*; and pining, eager, ungratified desire for any object whatever, in a particular state of constitution, whether for an individual or

General  
causes.

Whether  
love-sick-  
ness ever a  
cause:

\* Panarol. Jätrolog. Pentech. III. Obs. 14.

Ephem. Nat. Cur. Dec. II. Ann. IX. Obs. 114.



GEN. I.  
Chlorosis.  
Green-  
sickness.

for a particular circle of society, for home or for country, is well known in many cases to break down the general health, and to lay a foundation for chlorosis, as well as many other complaints even of a severer kind. We have already noticed it as producing suppressed menstruation; as we have also the opposite state of disappointment overcome, renewed hope, and a prospect of connubial happiness, as one of the best and speediest means of cure.

Retained  
menses  
and dys-  
pepsy  
during pu-  
berty the  
most com-  
mon  
causes:  
and hence  
all these  
affections  
sometimes  
blended or  
confounded  
by noso-  
logists.

Perhaps retained menses, and dyspepsy at the period of puberty, are the most common causes; and hence chlorosis makes so near an approach to both these complaints that some nosologists have merged it altogether in the first, and others in the second. Dr. Cullen so far as relates to his *opinion*, is an example of the former. Dr. Young, so far as relates to his *arrangement*, of the latter. It is necessary to attend to this limitation: for while Dr. Cullen, in the later editions of his Synopsis, asserts “nullam chlorosis speciem veram, præter illam quæ retentionem menstruorum comitatur, agnoscere vellem”—he still continues chlorosis in all the editions of this work as a distinct genus from amenorrhœa, or PARAMENIA *obstructionis*, of which upon this view of the subject it should be only a species or variety. In the same manner, Dr. Young, while he makes chlorosis a mere species of dyspepsia in his classification, observes, as though dissatisfied with its arrangement, “I have followed a prevalent opinion, but there are various reasons for thinking it is quite as naturally connected with amenorrhœa.”

According  
to Sauvages  
occurs in  
infancy.

Chlorosis is often, indeed, not only connected with amenorrhœa, but a consequence of it. Yet few writers have felt themselves able to adopt Dr. Cullen's views upon the subject, and to believe it in every instance a modification of this disease. Sauvages asserts that there are daily cases of chlorosis occurring among children from their cradles; and he has hence, among his chloroses VERÆ, set down one species under the name of chlorosis *infantum*. This, however, is to generalize the term too widely, and to make it include all cases marked

but the  
cases are  
those of  
dyspepsy  
only.

by indigestion, and a chlorid countenance. Yet I cannot but concur with those authors who contend that chlorosis is by no means uncommon among females who have *no interruption* of the menstrual flux; though a derangement of some kind or other in quantity, quality, or constituent principles appears to be always connected with it; and is for the most part the cause or leading symptom. There is even ground for carrying the term, with other authors, still further, and applying it to green-sick boys as well as green-sick girls, for reasons which will be offered in their proper place.

For the present, it is sufficient to characterize chlorosis as a dysthesis or cachexy, produced by a diseased condition of the sexual functions operating upon the system at large, and hence most common to the age of puberty in which this function is first called forth by the complete elaboration of organs that have hitherto been inert and undeveloped. "A certain state of the genitals," says Dr. Cullen, "and the remark will apply to both sexes equally, is necessary to give tone and tension to the whole system; and, therefore, that if the stimulus arising from the genitals be wanting, the whole system may fall into a torpid and flaccid state, and from thence chlorosis may arise."

The genus CHLOROSIS offers the two following species :

- |                        |                         |
|------------------------|-------------------------|
| 1. CHLOROSIS ENTONICA. | ENTONIC GREEN-SICKNESS. |
| 2. ————— ATONICA.      | ATONIC GREEN-SICKNESS.  |

GEN. I.  
Chlorosis.  
Green-sickness.  
Yet in adult life at times occurs where no interruption of the menstrual flux, though generally some derangement in its quantity or quality.  
Chlorotic boys.  
General character.

## SPECIES I.

## CHLOROSIS ENTONICA.

*Entonic Green-sickness.*

HABIT PLETHORIC; PAIN IN THE HEAD, BACK, OR LOINS;  
FREQUENT PALPITATIONS AT THE HEART; FLUSHES IN  
THE FACE; PULSE FULL, TENSE, AND FREQUENT.

GEN. I.  
SPEC. I.  
Necessary  
distinction  
of this  
species  
from the  
ensuing.

CHLOROSIS has been commonly confined to the second or atonic species. But the symptoms and mode of treatment of the disease, as it appears in a vigorous, florid, and full-bosomed country-girl overflowing with health and hilarity; and in a delicate, pale-faced, emaciated town-girl, debilitated by an indulgence in a course of luxurious indolence from her infancy, seem to justify and even demand a distinction.

Wherein  
they agree.

In both cases there is a want of energy of mind, great irregularity in the mental functions, and often a high degree of irritability in the nervous system, clearly proving a very extensive disturbance of the general balance. But they differ in the symptoms enumerated in the definitions, than which no two sets can well be more at variance. They differ also in the remote and proximate causes, and consequently in the mode of treatment.

Wherein  
they differ.

Descrip-  
tion.

In the species before us, characterized by a rich and oppilated habit, with a full and tense pulse, and pressive pains in the head or loins, the ordinary causes are catching cold in the feet at the period of the catamenial discharge, by which the constitutional plethora is considerably aggravated, and the plethoric excess itself even where no cold has been received. The pains so common and often so severe in the back and loins, and from sympathy, not unfrequently in other parts, evince local

irritability with entastic spasm in the organs which form the seat of the disease. There is here a morbid accumulation of living power: the fabric is satiated or overloaded; and for the very reason that in dyspermia *entonica* or super-erection, as we shall have occasion to observe presently, there is no seminal emission, or as in double-flowering plants there is no efficient development of the sexual distinctions, in the present case there is no efficient secretion of the genital fluids. And as we have shown in the Physiological Proem to the present order, that the maturity of the system in females as well as in males, depends upon a development of the sexual organization in all its powers, and a certain degree of resorption of its secreted materials, the general frame, how rich soever and even oppressed with juices of other kinds, must remain incomplete and unripened, and sicken at the time of maturity for want of this appropriate stimulus. And if such an effect may occur where there is no concomitant source of excitement, we can easily conceive how much more readily it may take place upon catching cold in the feet, or on a sudden and violent mental emotion, or any other cause that may accidentally add to the pressive irritation of the organs immediately affected, and increase their tendency to spasmodic action.

Yet there can be no doubt that the species before us, though the offspring of a redundancy of living power, if neglected, or obstinate, and of long continuance, may, and often does, by debilitating the constitution, terminate in the atonic species we shall presently enter upon.

Before such a change, however, takes place, and particularly in the commencement of the disease, we are loudly called upon for general depletion. Copious and not unfrequently repeated venesections will be found necessary: cooling, rather than heating and irritant purgatives should be interposed; and where pain about the lumbar region, or any other local irritation, is very troublesome, the hip-bath, or a general warm-bath should be

GEN. I.  
SPEC. I.  
Chlorosis  
entonica.  
Entonic  
green-sick-  
ness.

Pathology.

May terminate in  
the atonic  
species.

Medical  
treatment.



GEN. I. used steadily. And when, by this plan, the sanguiferous  
SPEC. I. entony is subdued, a plain diet, regular exercise, and  
sober hours, will easily accomplish the rest.

---

## SPECIES II.

### CHLOROSIS ATONICA.

#### Atonic Green=sickness.

HABIT DEBILITATED; GREAT INACTIVITY AND LOVE OF  
INDULGENCE; DYSPNŒA ON MOVING; LOWER LIMBS  
COLD AND EDEMATOUS, ESPECIALLY AT NIGHT; PULSE  
QUICK AND FEEBLE.

GEN. I.  
SPEC. II.  
Specific  
character.

IN conjunction with the above specific symptoms, there is, in this division of the disease, the same want of energy of mind, and fickleness of temper, and corporeal irritability which we have already noticed in the preceding, and this too in a much greater degree; abundantly proving a very extensive disturbance of the general balance.

Chiefly  
found  
among the  
indolent  
and the  
victims of  
fashionable  
life.

For examples of this species we are to look not into the quiet and sober retreats of rural life, marked by simple meals, healthful activity, and early hours; but to the gay and glittering routine of town indulgences, and midnight parties, and hot unventilated atmospheres; the havoc of all which is to be seen in the pale, but bloated countenance, the withering form, emaciated muscles, and departing symmetry of those who are the victims of a life of pleasure; and who, in consequence of their turning night into day, are exhausted, and drowsy, and spiritless, and perhaps confined to their beds all the morning; thus carrying on the inversion of nature, and turning in like manner the day into night.

Under a life of this kind, it is impossible for a growing

girl to acquire a healthy maturity: and most happy is it for her that the caprice of fashion, which calls upon her to make this heavy sacrifice of her person for one half the year, drives her, in most cases, into the freshening shades and soberer manners of the country for the other half.

GEN. I.  
SPEC. II.  
Chlorosis  
atonica.  
Atonic  
green-sick-  
ness.

There are other girls, however, who without these peculiar sources of exhaustion, have so much constitutional debility and relaxation, as to be incapable of bearing the double load of growth and sexual developement without manifesting a considerable degree of sickness in all their functions.

Sometimes  
produced  
by a natu-  
ral debility.

In both these cases the disease is probably produced by a chemical imperfection or want of elaboration in the blood itself, so as not to keep pace with the expansion and irritability of the sexual organs; and consequently so as not to afford them a pabulum sufficiently rich and ripe for secretion.

Probably a  
chemical  
imperfec-  
tion in the  
blood in this  
species.

Here, therefore, bleeding and purgatives would only add to the evil; and it behoves us even from the first to employ a strengthening and tonic plan, and to extend it through all the departments of diet, exercise, and medicine: the whole of which, however, may be collected from what has already been observed on the genus  
PARAMENIA.

Medical  
treatment.

The same kind of debility which prevents the full developement of the sexual organization and a secretion of the sexual juices in growing girls prevails, not unfrequently, in growing boys, and especially when about the age of puberty the growth is rapid, and outruns the general strength of the system. And it is to this state I alluded when observing a page or two back, that the term chlorosis has occasionally been applied to males as well as to females at this unsettled period of life. In the volume of Nosology I have remarked that it is frequently so applied in the East, and especially among Persian writers, who accordingly express one subdivision of the disease by the name of bimariy kodek (بیماری کودک)

How far  
chlorosis  
may exist  
in males.

Generally  
admitted  
among  
Eastern  
writers:

GEN. I.  
SPEC. II.  
Chlorosis  
atonica.  
Atonic  
green-sick-  
ness.  
and the idea  
adopted by  
various  
European  
authors.

or morbus *puerorum*. Bonet has followed the oriental extension of the term, and has given instances of its occurring not only in pubescent but even adult males: and, in like manner, Sir Gilbert Blane in his table of diseases under the article chlorosis, observes that one of his patients affected with this complaint “was a male of seventeen, who had all the characters of this malady except that which is peculiar to the female sex. He was treated like the others, and recovered under the use of carbonated iron and aloes\*.” It is on this account that the definition of chlorosis will be found, in the present work, to vary in some degree from all that have preceded it, so as to render its characters capable of embracing the male as well as the female form of the disease, which unquestionably ought to be included under it: and is to be attacked by the same remedial plan.

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\* Medico-Chir. Trans. Vol. iv. p. 140.

## GENUS II.

## PRÆOTIA.

## Genital Precocity.

PREMATURE DEVELOPEMENT OF SEXUAL ORGANIZATION  
OR POWER.

THE generic term PRÆOTIA or PRÆOTES is copied from Theophrastus, and derived from *πρῶτι*, "præmature." It is, however, peculiarly applied to premature semination.

GEN. II.

The genus, as embracing both sexes, comprises the two following species:

1. PRÆOTIA MASCULINA.      MALE PRECOCITY.
2. ——— FEMININA.      FEMALE PRECOCITY.

## SPECIES I.

## PRÆOTIA MASCULINA.

## Male Precocity.

PREMATURE DEVELOPEMENT OF SEXUAL ORGANIZATION  
IN MALES.

BOTH the mind and body advance in their ordinary career, by slow and almost imperceptible steps to ma-

VOL. IV.

I

GEN. II.  
SPEC. I.  
General  
pathology.



GEN. II.  
SPEC. I.  
Præotia  
masculina.  
Male  
precocity.  
Precosity  
of both  
mental and  
corporeal  
powers.

turity; faculty after faculty, and function after function puts forth, acquires strength, and becomes perfected. But it occasionally happens that this ordinary course is departed from, and that the whole system as well mental as corporeal, or, which is still more frequent, that particular powers or organs, push forward with incredible rapidity. The admirable Crichton, as he is commonly called, and others pre-eminently gifted in the same extensive way, afford instances of the first of these remarks: and those who, in early and even in infant life, have shown a peculiar aptitude for an acquisition of languages, or of music, or numerical arithmetic, give examples of the last kind.

Precosity  
of sexual  
organization.

It is not hence much to be wondered at that a like extraordinary precocity should sometimes exhibit itself in the developement of sexual organization and power: and that from a peculiar degree of local irritation or erethism, the pubes should be found covered with hair, the testes be formed and capable of secreting a seminal fluid, and the penis be susceptible of a concupiscent turgescence and erection.

Exemplification.

It is not necessary to dwell upon instances of exemplification, which may be traced in great numbers in the writings of physiologists who have been curious upon the subject. Those who are desirous of doing so, may turn to the *Journal des Sçavans* for 1688, and the *Philosophical Transactions* for 1745. In the former, Boiset gives an instance of this disgusting anticipation in a boy of three years old; in the latter, the subject in the case recorded was two years and eleven months. A similar example at a similar age is well known to have occurred, only a few years since, in a boy who was exhibited by his friends for money to medical practitioners in this metropolis; and may be found, together with various others, minutely described in the first volume of the *Medico-Chirurgical Transactions*.

Mischief of  
a public exposure of

With respect to moral, or even medical treatment, nothing can be worse than this very common practice of

a public exposure whenever the case occurs among the poor, who are so strongly tempted to make a profit of it. The orgasm is fed by a repetition of examinations, and the polluting tide that exhausts and debases the body, is at length accompanied, even though it should not be so at first, with a polluting pleasure, that in a still greater degree exhausts and debases the mind. An occasional application of leeches to the seat of affection, cooling aperients, a cool, loose, and unirritating lower dress, with the daily use of a bidet of cold water, or iced water, will form the best plan that can be pursued on such occasions: and, by producing a healthful repression, may enable the unhappy infant to grow up with gradual vigour to the possession of a hearty manhood, instead of sinking, as has been sometimes the case, into a premature and tabid old age at the early period of puberty.

GEN. II.  
SPEC. I.  
Præotia  
masculina.  
Male  
precocity.

the person  
under these  
circum-  
stances.  
Remedial  
treatment.

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## SPECIES II.

### PRÆOTIA FEMININA.

#### *Female Precocity.*

#### PREMATURE DEVELOPEMENT OF SEXUAL ORGANIZATION IN FEMALES.

UNDER the species of obstructed menstruation, we have observed that this secretion which commonly affords a proof that the sexual organization is developed, and its function completed, takes place at very different periods of life under different circumstances, chiefly those of climate and peculiarity of constitution: and that though its ordinary epoch is that of thirteen or fourteen, it has sometimes, under the influence of a tropical sun, or a warm

GEN. II.  
SPEC. II.  
General  
physiologi-  
cal re-  
marks.

GEN. II.

SPEC. II.

Precotia

feminina.

Female

precocity.

The present

species

readily ac-

counted for.

and forward temperament, shown itself as early as eight or nine years of age \*.

There is hence no difficulty in conceiving that, under the influence of the same kind of local erethism we have noticed in the preceding species, the sexual organization in females may acquire a similar precocity to that in males. And so complete has been the developement occasionally, that we have numerous and well authenticated instances of pregnancy itself occurring at the early age of nine, on which we shall have to remark more fully in the introductory observations to the third Order of the present Class, when treating of morbid impregnation.

The morbid  
predispo-  
sition to be  
timely  
checked:

This foremarch of nature should be timely checked, for it will otherwise assuredly lead to a very great debility of the system in general, and is usually found to stint the stature, and induce a premature old age. And the means of repression may be the same as those already proposed for male precocity.

not always  
connected  
with any  
cupidinous  
orgasm.  
Exempli-  
fied.

The premature developement of organization before us does not always seem to be connected with any cupidinous orgasm, or at least it has occurred under circumstances that render it extremely difficult to entertain any such idea. One of the most singular instances of this kind is a case of extra-uterine fetation communicated by Dr. Baillie to the Royal Society, and published in their Transactions for 1789. It consisted of a suetty substance, hair, and the rudiments of four teeth, found in the ovarium of a child of not more than twelve or thirteen years of age, with an infantine uterus, and perfect hymen †.

Example  
explained.

In this case there can be little doubt that an ovulum by some peculiar irritation had been excited to the rudimental process of an imperfect conception, and that it had, in consequence, been separated from its niche, and a corpus luteum taken its place. In the Physiological

\* Walther, Thes. Obs. 40.

† Phil. Trans. Vol. LXXIX. p. 71.

Proem to the present Class, we have observed that such changes are occasionally met with in mature virgins whose organs have afforded ample proof of freedom from sexual commerce, the ordinary mode of accounting for which, is by supposing that although they have never cohabited with the male sex, they have at times felt a very high degree of orgasm or inordinate desire, and that such feeling has been a sufficient excitement to produce such an effect. The author has already expressed himself not satisfied with this explanation; and the case before us can hardly be resolved into any such causation.

GEN. II.  
SPEC II.  
Pæotia  
feminina.  
Female  
precocity.



## GENUS III.

## L A G N E S I S.

**Lust.**

INORDINATE DESIRE OF SEXUAL COMMERCE, WITH ORGANIC TURGESCENT AND ERECTION.

GEN. III. LAGNESIS is a derivative from *λάγνης*, "libidinosus;"  
Origin of "præceps in venerem:" and, as a genus, is intended to  
generic term. include the SATYRIASIS and NYMPHOMANIA of Sauvages,  
Synonyms. and later authors; which, chiefly, if not entirely, differ  
from each other only as appertaining to the male or female  
sex, and in their symptoms do not, like the preceding  
genus, offer ground for two distinct species. The proper  
species belonging to this genus are the following:

1. LAGNESIS SALACITAS. SALACITY.
2. ——— FUROR. LASCIVIOUS MADNESS.

## SPECIES I.

## LAGNESIS SALACITAS.

**Salacity.**

THE APPETENCY CAPABLE OF RESTRAINT; THE EXCITEMENT CHIEFLY CONFINED TO THE SEXUAL SYSTEM.

GEN. III.  
SPEC. I. IN a state of health and civilized society there are two  
Physiological remarks. reasons why mankind are easily capable of restraining

within due bounds the animal desire that exists in their frame from the period of puberty till the infirmity of age: the one is of a physical and the other of a moral kind. The natural orgasm of men differs from that of brutes in being permanent instead of being periodical, or dependent upon the return of particular seasons; and on this very account is less violent, more uniform, and kept with comparative facility within proper limits. This is a cause derived from the physical constitution of man. But the power of habit and the early inculcation of a principle of abstinence and chastity in civilized life, form a moral cause of temperance that operates with a still stronger influence than the preceding, and lays down a barrier, which, though too often stealthily broken into, yet in the main, makes good its post and serves as a general check upon society.

GEN. III.  
SPEC. I.  
Lagnesis  
Salacitas.  
Salacity.  
Ordinary  
causes of  
temper-  
ance.

As man rises in education and moral feeling, he proportionally rises in the power of self-restraint; and consequently, as he becomes deprived of this wholesome law of discipline, he sinks into self-indulgence and the brutality of savage life. And were it not that the very permanency of the desire, as we have already observed, torpedifies and wears out its goad, the savage, destitute of moral discipline, would be at all times as ferocious in his libidinous career as brutes are in the season of returning heat; when, stung with the periodical ardour, and worked up almost to fury, the whole frame of the animal is actuated with an unbridled force, his motions are quick and rapid, his eyes glisten, and his nerves seem to circulate fire. Food is neglected; fences are broken down; he darts wild through fields and forests, plunges into the deepest rivers, or scales the loftiest rocks and mountains, to meet the object that is ordained by nature to quell the pungent impulse by which he is urged forward\*:

Hence less  
restraint in  
savage life:

and none  
among the  
lower  
classes of  
animals.

Nonne vides ut tota tremor pertentet equorum  
Corpora, si tantum notas odor attulit auras?

\* See Crichton on Mental Derangement, II. p. 301.

## GEN. III.

SPEC. I.  
Lagnesis  
Salacitas.  
Salacity.

Restraint  
not equally  
obtained in  
all persons  
and at all  
periods of  
life.

Ac neque eos jam fræna virûm, neque verbera sæva,  
Non scopuli, rupesque cavæ, atque objecta retardant  
Flumina, correptos undâ torquentia montes\*.

The power of restraint, however, does not operate alike on all persons even in the same state of society, and under a common discipline. Period of life, constitution, and habit, produce a considerable difference in this respect, and lay a foundation for the four following varieties of morbid salacity:

α Pubertatis.	Salacity of youth.
ε Senilis.	———— of age.
γ Entonica.	———— of full habit.
δ Assueta.	———— of a debauched life.

α L. Salaci-  
tas puber-  
tatis.  
Salacity of  
puberty.  
Pathology.  
Why most  
frequent in  
relaxed  
habits.

The FIRST VARIETY proceeds not so much from organic turgescence, as from local irritability: for it is chiefly found in relaxed and delicate frames, weakened by overgrowth, or a life of indolence and indulgence. The action is new, and where, from whatever cause, the irritability is more than ordinary, a degree of excitement is produced which shows itself constitutionally or topically. If in the former way, hysteria or chorea, or some other nervous affection, is a very frequent effect: if in the latter, a high-wrought and distressing degree of appetency. It is under this state that females are said to be capable of separating ovula from their ovaries, and to form corpora lutea without copulative percussio, in the same manner as the ovaries of quadrupeds that are only capable of breeding in a certain season of the year, exhibit during their heat, manifest proofs of excitement and especially of florid redness, when examined by dissection. I do not think the assertion concerning women is altogether established: but in the case of young men when entering upon, or emerging from pubescence, and of the relaxed and delicate frame just noticed, nothing is more common than involuntary erection and seminal emission during sleep,

\* Virg. Georg. Lib. III. 250.

often connected with a train of amorous ideas excited by the local stimulus, as we have already observed under PARONIRIA SALAX\*.

It is possible that this affection may occasionally be a result of entony or plethoric vigour as well as of atony or delicacy of health: but the last is by far the most common cause.

In the first case we have nothing more to do than to reduce the excess of living power by copious venesections and purgatives, active labour, or other exercise and a low diet. In the second, it will be expedient in a very considerable degree to reverse the plan. We may, indeed, palliate the topical irritation by the use of leeches and cooling laxatives; but in conjunction with this, we should employ the unirritant tonics as the salts of bismuth, zinc, and silver, or the sedative tonics as the mineral acids, most of the bitters, and the cold bath. By taking off the debility we take off the irritation, and, by taking off the irritation, we overpower the disease.

The SALACITY OF AGE is a very afflictive malady, and often wears away the hoary form to the last stage of a tabid decline by the frequency of the orgasmic paroxysms, and the drain of seminal emissions without enjoyment. It is usually a result of some accidental cause of irritation in the ovaria, the uterus, the testes, or the prostrate gland; and has sometimes followed upon a stone in the kidneys or bladder; and is hence best relieved by removing or palliating the local irritation by a warm hipbath, anodyne injections, or cataplasms of hemlock, or the other umbellate or lurid plants in common use. Where these do not succeed, our only resource is opium, and the warmer tonics.

In the first volume of the Transactions of the Medical Society of London, Mr. Norris has given a very curious and striking case of this variety, produced by a blow received a few months before near the prostrate gland,

GEN. III.  
SPEC. I.  
L. Salacitas pubertatis.  
Salacity of puberty.  
Sometimes a result of entony.

Remedial treatment.

L. Salacitas senilis.  
Salacity of age.

Causes.

Singular exemplification.



GEN. III.

SPEC. I.

♂ L. Salaci-

tas senilis.

Salacity of  
age.

followed by a small, but nearly indolent tumour on the part affected. The patient was a married man of sixty-seven, and during the violence of the erethism occasioned by this local irritation, which had now continued for two months, was reduced to a state of the most wretched and squalid emaciation. He could not restrain the libidinous propensity, though he confined himself to his wife, with whom he copulated from fifteen to twenty times nightly, receiving, nevertheless, pain rather than pleasure from the indulgence. The wife, a matronly woman of great modesty, was hereby rendered extremely ill from local inflammation. By supporting the system with tonics, and bringing the tumour to suppuration, the man completely recovered.

γ L. Salaci-  
tas ento-  
nica.  
Salacity of  
full habit.  
Curative  
process.

ENTONIC SALACITY, or that of a robust and sanguine temperament, is not always so easily remedied as might at first be supposed. Copious venesections, purgatives, and a reducent diet, and this succeeded by a regular use of neutral salts, and especially of nitre, will often, indeed, be found highly beneficial. But the erethism occasionally becomes chronic, and defies the effects of all medicines whatever: and, where there is an excess of irritability in the constitution, and the patient, from a principle of chastity, has sedulously restrained himself from all immoral indulgences, the nervous system, and even the mind itself, has sometimes suffered in a very distressing degree. One or two examples of this we have already noticed under ECPHRONIA *Mania*, or madness\*; and it is hardly worth while to dwell further upon the subject. The natural cure is a suitable marriage wherever this can be accomplished: but unless the union be of this character, it will often be attempted in vain. Professor Frank of Vienna, in his System of Medical Polity, relates the case of a lady of his acquaintance, of a warm and amorous constitution, who was unfortunately married to a very debilitated and impotent man; and who,

Mind  
sometimes  
suffers from  
a transfer  
of morbid  
action:

or the en-  
tire system  
from  
general  
irritation.

---

\* Vol. III. p. 93.

although she often betrayed unawares, by her looks and gestures, the secret fire that consumed her, yet from a strong moral principle resisted all criminal gratification. After a long struggle her health at last gave way: a slow fever seized her, and released her from her sufferings.

The SALACITY OF A DEBAUCHED LIFE, or lechery produced and confirmed by habit, can only be cured by a total change of habit: which is a discipline that the established debauchee has rarely the courage to attempt. Exercise, change of place and pursuits, cooling laxatives, and a less stimulant diet than he will commonly be found accustomed to, may assist him in the attempt: but in general the mind is as corrupt as the body, and the case is hopeless. He perseveres, however, at his peril, for with increasing weakness, he will at length sink into all the miserable train of symptoms which characterize that species of marasmus, which is usually expressed by the name of *tabes dorsalis*, and which we have described already\*.

GEN. III.

SPEC. I.

γ L. Salacitas entonica.

Salacity of full habit.

Treatment.

δ L. Salacitas assueta.

Salacity of a debauched life.

Remedial treatment.

## SPECIES II.

### L A G N E S I S F U R O R.

#### Lascivious Madness.

APPETENCY UNBRIDLED, AND BREAKING THE BOUNDS OF MODEST DEMEANOUR AND CONVERSATION: MORBID AGITATION OF BODY AND MIND.

Most of the causes of the preceding species are causes of the present, though it shows itself less frequently at

GEN. III.

SPEC. II.

Causes.

\* Vol. II. p. 736.

GEN. III.  
SPEC. II.  
Iagnesis  
Furor.  
Lascivious  
madness.  
Pathology.

Mind  
suffers from  
an exten-  
sion of the  
erethism,  
rather than  
a transfer  
of morbid  
action.

Descrip-  
tion.

the age of puberty. It is in fact very nearly related to the species SALACITAS, though the local irritation is more violent, and the mind participates more generally and in a very different manner. Under the first, the patient has a sufficiency of self-command to conduct himself at all times with decorum, and not to offend the laws and usages of public morals; and, if, as is rarely the case however, the mind should at length become affected, it is rather by a transfer of the morbid irritation than an extension of it, so that patients thus afflicted very generally lose the venereal erethism, and show no reference to it in the train of their maniacal ideas. In lascivious madness, on the contrary, this last symptom continues in its utmost urgency, all self-command is broken down, the judgement is overpowered, the imagination enkindled and predominant, and the patient is hurried forward by the concupiscent fury like the brute creation in the season of heat, regardless equally of all company and all moral feeling. As it occurs in males it is the satyriasis *furens* of Cullen: as it occurs in females it is the nymphomania *furibunda* of Sauvages.

The pulse is quick, the breathing short, the patient is sleepless, thirsty, and loathes his food; the urine is evacuated with difficulty, and there is a continual fever. In women the disease is often connected with an hysterical temperament, and even commences with a semblance of melancholy\*; and I once had an instance of it, from local irritation, shortly after child-birth. The child having suddenly died, and there being no more demand for a flow of milk, the fluid was repelled from the breasts with too little caution, and the uterine region, from the debility it was yet labouring under, became the seat of a transferred irritation. Among females the disease is strikingly marked by the movements of the body and the salacious appearance of the countenance, and even the language that proceeds from the lips. There is often,

\* Delius, Advers. Fascic. 1.

Belol, Furor uterinus, Melancholicus Effectus, Paris, 1621.

indeed, at first some degree of melancholy, with frequent sighings; but the eyes roll in wanton glances, the cheeks are flushed, the bosom heaves, and every gesture exhibits the lurking desire, and is enkindled by the distressing flame that burns within.

GEN. III.  
SPEC. II.  
Lagnesis  
Furor.  
Lascivious  
madness.

In some cases it has unquestionably proceeded from the perpetual friction of an enormous clitoris, making an approach, from its erection, to what Galen calls a female priapism. Büchner, Schurig \*, and Zacutus Lusitanus † gives numerous examples of this: and Bartholin has the case of a Venetian woman of pleasure, whose clitoris was rendered bony by frequent use, and consequently became a source of constant irritation.

Sometimes  
produced  
by the friction  
of an enormous  
clitoris.

In hot climates this kind of enlargement and elongation is by no means uncommon, and, as it becomes a source of uncleanness, as well as of undue excitement, circumcision or a reduction of the clitoris to its proper size, has been often performed with advantage. The same operation has been proposed for the case before us, and, in some instances, it has succeeded completely. "A young woman," says M. Richerand, "was so violently affected with this disease, as to have recourse to masturbation, which was always accompanied with profuse emissions; and which she repeated so frequently as to reduce herself to the last stage of marasmus. Though sensible of the danger of her situation, she was not possessed of self-command enough to resist the orgasmic urgency. Her parents took her to Professor Dubois, who, upon the authority of Levret, proposed an amputation of the clitoris, which was readily assented to. The organ was removed by a single stroke of the bistoury, and all hemorrhage prevented by an application of the cautery. The wound healed easily, and the patient obtained a radical cure of her distressing affection ‡.

This enlargement  
frequent in  
hot climates: and  
at times relieved  
by circumcision:  
which has been  
performed with  
success in the  
present variety.

Where the cause cannot be easily ascertained we must

General  
treatment.

\* Gynæcolog. p. 2. 17.

† Prax. Admir. Lib. II. Obs. 91.

‡ Richerand, Nosographie Chirurgicale, &c.



GEN. III.  
SPEC. II.  
Lagnesis  
Furor.  
Lascivious  
madness.  
Treatment.

employ a general plan of cure. If there be plethora or constitutional fulness, venesection should never be omitted; and, in most cases, cooling laxatives, a spare diet, with acid fruits and vegetables, cold bathing, local and general, will be found useful. Nitre, by attenuating the crasis of the blood, and diminishing its impetus, has often proved beneficial; and to this may be added conium, aconite and other narcotics. Camphor, which acts upon another principle, is a favourite medicine with many, and is also well worth a trial.

Satyriasis.  
Nymphomania.

From the infuriate state of the mind in most cases of this malady Vogel has arranged both satyriasis and nymphomania as species of MANIA. But this is incorrect; the fury of the mind is merely symptomatic. Parr, on the contrary, has ranked, under LAGNESIS, to which, with great perversion, he applies the term hallucinatio, erotomania or love-sickness, more properly a variety of EMPATHEMA *desiderii*, and which, in the present, and most other systems, is, therefore, regarded as a mental malady.

Love-sickness an occasional though very rare cause.

Love-sickness, however, may sometimes be an occasional or exciting cause, and its symptoms may be united with the complaint, and even add to the general effect, of which the History of the Academy of Sciences affords an instance\*: but in itself, it is, as we have already shown, altogether a disease of a different kind, and even nature; and where it becomes blended with concupiscent fury it must be from a concurrence of some of the special causes of the latter, either general or local, which we have just pointed out.

In males a hundred pollutions daily.

In males the disease has led to quite as much exhaustion as in females: Bartholin gives an example of a hundred pollutions daily.

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\* Ann. 1764. p. 26.

## GENUS IV.

## A G E N E S I A.

## Male Sterility.

## INABILITY TO BEGET OFFSPRING.

THE generic term is a compound from  $\alpha$  negative and  $\gamma\acute{\iota}\nu\omicron\mu\alpha\iota$ , "to beget," and will be found to comprehend the three following species, derived from impotency of power or energy; an imperfect emission where the power is adequate; or an incongruity in the copulative influences or fluids upon each other.

GEN. IV.  
Origin of  
the generic  
term.

1. AGENESIA IMPOTENS.      MALE IMPOTENCY.
2. ————— DYSSPERMIA.      SEMINAL MIS-EMISSION.
3. ————— INCONGRUA.      COPULATIVE INCONGRUITY.

Among plants we sometimes meet with a like generative disability; occasionally from imperfectly formed styles or stigmas, stamens or anthers; sometimes from a suppression of farina, and sometimes from a total destitution of seeds: which last defect is common to brome-  
lia *Ananas*; musa *paradisiaca*, or Banyan; artocarpus *incisa* or bread-fruit tree; and berberis *vulgaris* or common berberry.

A like defect some-  
times  
among  
plants.

## SPECIES I.

## AGENESIA IMPOTENS.

*Male Impotency.*

## IMPERFECTION OR ABOLITION OF GENERATIVE POWER.

GEN. IV.  
SPEC. I.  
The ana-  
phrodisia of  
some au-  
thors.

THE species before us is, perhaps, more generally called by the nosologists anaphrodisia, though this last term has been used in very different senses; sometimes importing a want of desire, sometimes inability, sometimes both; and sometimes only a particular kind of inability resulting from atony alone. The third species has never, hitherto, so far as the author knows, been introduced into any nosological arrangement, although the reader will probably find, as he proceeds, sufficient ground for its admission. And even the first and second, closely as they are connected by nature, have rarely, if ever, been introduced before under the same common division, but been regarded as distinct genera belonging to distant orders or even classes, and arranged with diseases that have little or no relation to them, of which numerous examples are given in the volume of Nosology.

Impotency in males may proceed from two very distinct causes, showing themselves in very different ways, and laying a foundation for the following varieties:

$\alpha$  Atonica.

Atonic impotency.

$\epsilon$  Organica.

Organic impotency.

$\alpha$  A. Impo-  
tens ato-  
nica.  
Atonic im-  
potency.  
Common  
causes.

In the FIRST of these there is a direct imbecility, or want of tone; produced chiefly by excess of indulgence, long-continued gleet, or a paralytic affection of the gene-

rative organs. It has also been occasioned by a violent contusion on the loins, or a fall on the nates \*.

Under the two last cases a cure is often effected by time, and local tonics and stimulants, especially cold-bathing: and the same process will frequently succeed where the weakness has followed upon a chronic gleet: in which we may also employ the course of remedies which have already been recommended for this complaint †.

Where the impotency results from a paresis or paralysis of the local nerves, or has been brought on by a life of debauchery, the case is nearly hopeless. We have heard much of aphrodisiacs, but there is none on which we can depend in effects of this kind. Wine, which is the ordinary stimulant in the case before us, will rarely succeed even in a single instance, and where it has done so, it has increased the debility afterwards. It is, in truth, one of the most common causes of the disease itself.

Cantharides have often been employed, but in the present day they are deservedly distrusted, and flourish rather in proverbs than in practice. Their effect, as a local stimulant, shows itself rather on the bladder and prostrate gland than on the testes, and as a general irritant in increasing the heat and action of the whole system, in which the testes may, perhaps, sometimes have participated. "They are," says Dr. Cullen, "a stimulant and heating substance, and I have had occasion to know them, taken in large quantity as an aphrodisiac, to have excited violent pains in the stomach, and a feverish state over the whole body ‡."

Many of the verticillate plants, as mint and pennyroyal, have been tried in a concentrated state for the same purpose, but with different, and even opposite ef-

GEN. IV.

SPEC. I.

α A. Impotens atonica. Atonic impotency. Mode of treatment when from debility or local injury.

Paresis or paralysis nearly hopeless. Aphrodisiacs a name without a thing.

Cantharides.

Verticillate plants.

\* Hildan. Cent. vi. Obs. 59.

† Art. Nat. Cur. Vol. v. Obs. 59.

‡ Mat. Med. Vol. II. p. 563.



GEN. IV.  
SPEC. I.  
α A. Impo-  
tens ato-  
nica.  
Atonic im-  
potency.  
Nests of  
the Java  
swallow.

fects, in the hands of different practitioners. To the present hour they are supposed by many to stimulate the uterus specifically, while they take off the venereal appetite in males. Upon sober and impartial trials, however, they seem to be equally guiltless of both: and may as readily be relinquished for such purposes as the nests of the Java swallow, which are purchased at a high price as a powerful incentive, and form an extensive article of commerce in the East.

Best aphro-  
disiacs to-  
nics of dif-  
ferent  
kinds.

Ginseng its  
pretensions.

The best aphrodisiacs are warm and general tonics, as the stimulant bitters, and the metallic salts, especially the preparations of iron. Ginseng, as an aromatic bitter, has a just claim to a further trial than it seems hitherto to have received. In China it has for ages been in high esteem, not only as a general restorative and roborant, but particularly in seminal debilities. Dr. Cullen appears to have thrown it out of practice by telling us that he knew "a gentleman a little advanced in life, who chewed a quantity of this root every day for several years, but who acknowledged that he never found his venereal faculties in the least improved by it." This is no doubt true, but the merits of a medicine are not to be decided by a single experiment of so very loose a kind.

Local irri-  
tants.

Local irritants, in many cases, have undoubtedly been of use, as blisters, caustics, and setons. Electricity is said to have been still more extensively serviceable: and friction with ammoniated oil or spirits, or any other rubefacient is fairly entitled to a trial. Stinging with nettle-leaves (*urtica urens*) was, at one time, a popular remedy, and flagellation of the loins \* or nates †, or both, still more so. The principle is the same, and we hence account for the success which is said to have attended all these in particular cases.

ε A. Impo-  
tens organi-  
ca.  
Organic im-  
potency.  
Causes.

In ORGANIC IMPOTENCY, forming our second variety, the chance of success is generally hopeless. This proceeds from a misformation or misorganization of the

\* Meibom. de Flagrorum usu in re Venerea.

† Riedlin, Linn. Med. 1696. p. 6.

parts, either natural or accidental: as an amputated, injured, or enormous penis, or a defect or destitution of the testes. Plater introduces brevity or exility of the penis \* among the causes, but these evils are generally overcome by habit. An incurvated, retracted, or otherwise distorted form is also mentioned by many writers, but these seem rather to belong to the ensuing species. An unaccommodating bulk of the organ seems to have been no uncommon cause †. Shenck gives an instance of this kind in which the bulk was produced by the monstrosity of a double penis ‡; and Albinus relates a case of divorce obtained against a husband from inability to enter the vagina *ob penem inormem* §. A similar litigation with divorce is recorded by Plater ||.

GEN. IV.  
SPEC. I.  
6 A. Im-  
pens orga-  
nica.  
Organic  
impotency.

## SPECIES II.

### AGENESIA DYSSPERMIA.

#### Seminal Misemission.

##### IMPERFECT EMISSION OF THE SEMINAL FLUID.

THIS is the dysspermatismus, or, as it is usually but incorrectly spelt, dy-spermatismus. The termination is varied, not merely on account of greater brevity and simplicity, but in conformity with the parallel Greek

GEN. IV.  
SPEC. II.  
Dyssperma-  
tismus of  
many  
authors.

\* Observ. Lib. i. pp. 249. 250.

† Schurig. Gynæcolog. p. 226.

Wadel, Pathol. Sect. III. p. 11.

‡ Observ. Lib. iv. N. 2. 8.

§ Dissert. de Inspectione corporis, forensis, in causis matrimonialibus fallacibus et dubiis. Hall. 1740.

|| Observ. Lib. i. p. 250.

GEN. IV.  
SPEC. II.  
Agnesia  
Dysspermia.  
Seminal  
misemis-  
sion.

compounds, polyspermia, gymnospermia, aspermia, terms well known to every botanist, and the two former of which are elegantly introduced into the Linnéan vocabulary.

Imperfection or defect of emission proceeds from numerous causes, accompanied with some change of symptoms as appertaining to each, and hence laying a foundation for the following varieties :

- |   |  |
|---|--|
| <p>α Entonica.<br/>Entonic misemission.</p>         | <p>The imperfect emission proceeding from super-erection or priapism.</p>  |
| <p>β Epileptica.<br/>Epileptic misemission.</p>     | <p>Rendered imperfect by the incursion of an epileptic spasm produced by sexual excitement during the intercourse.</p>   |
| <p>γ Anticipans.<br/>Anticipating misemissions.</p> | <p>The discharge ejected hastily, prematurely and without due adjustment.</p>  |
| <p>δ Cunctans.<br/>Retarding misemission.</p>       | <p>The discharge unduly retarded from hebetude of the genital organs: and hence not accomplished till the orgasm, on the part of the female, has subsided.</p> |
| <p>ε Refluens.<br/>Refluent misemission.</p>        | <p>The discharge thrown back into the vesiculæ seminales or the bladder, before it reaches the extremity of the penis.</p>                                     |

α A. Dys-  
spermia  
entonica.  
Entonic  
misemis-  
sion.  
Strikingly  
exempli-  
fied.

Of the first, or ENTONIC VARIETY, examples are by no means uncommon. Dr. Cockburn gives an instance in a young noble Venetian, who, though married to a fine and healthy young lady, had no seminal emission in the act of union notwithstanding there was a vigorous erection, whilst he could discharge very freely in his dreams \*.

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\* See a similar case in Marcel. Donat. Lib. iv. Cap. 18.

He was greatly afflicted, as were also his family, by such a misfortune; and as no remedy could be devised at home, the Venetian ambassadors resident at the different courts of Europe, were requested to consult the most eminent physicians in their various quarters. The case came in this manner under the notice of Dr. Cockburn, who, hitting accurately upon the cause of the retention, and ascribing it to the violence of the erection, or rather to the plethora of the vessels of the penis, whose distention produced a temporary imperforation of the urethra, so that the powers which threw out the semen could not overcome the resistance, an effect which probably did not occur in dreaming, advised purgative medicines and a slender diet, which soon produced the desired issue\*.

I remember, many years ago, a healthy young couple who continued without offspring for seven or eight years after marriage, at which period the lady, for the first time, became pregnant, and continued to add to her family every year till she had six or seven children; and in professional conversation with the father, he has clearly made it appear to me that the cause of sterility, during the above period, was the morbid entony we are now discussing. Time, that, by degrees, broke the vigour of the encounter, effected at length a radical cure, and gave him an offspring he had almost despaired of. Mr. J. Hunter recommends opium in this case, as the best allayer of the undue stimulus.

The SECOND VARIETY, or misemission from the incursion of an epileptic fit, it is not difficult to account for. Persons who are predisposed to epilepsy, are, for the most part, of a highly irritable habit; and wherever the predisposition exists, any accidental excitement, as we have already shown in discussing this affection †, is sufficient to produce a fresh paroxysm: and hence it is seldom more likely to occur than from the percussing of a sexual embrace. Even death itself has sometimes ensued in consequence of the violence of the venereal paroxysm.

GEN. IV.  
SPEC. II.  
α A. Dys-  
spermia  
entonica.  
Entonic  
misemis-  
sion.

Additional  
illustration.

α A. Dys-  
spermia  
epileptica.  
Epileptic  
misemis-  
sion.  
Cause  
explained.

\* Edin. Med. Ep. i. p. 270.

† Vol. III. Sympasie Epilepsia, p. 536.



GEN. IV.  
SPEC. II.

ε A. Dys-  
spermia  
epileptica.  
Epileptic  
misemis-  
sion.

Exempli-  
fied.

Celibacy  
advisable.

Where  
married,  
abstinence  
at particu-  
periods.

γ A. Dys-  
spermia an-  
ticipans.  
Anticipa-  
ting mis-  
emission.

General  
cause

and mode of  
treatment.

δ A. Dys-  
spermia  
cunctans.  
Retarding  
misemis-  
sion.

Examples of epilepsy from this cause, as collected in the public medical records, are numerous. Among men, one of the most famous instances is that of the celebrated Hunnish chief Attila \*. Morgagni† and Sinbaldus‡ have given examples among women.

Hence a life of matrimony had better be relinquished by those who are thus afflicted, as well on their own accounts, as on that of their descendants. And where marriage is actually effected, sexual commerce should be sedulously abstained from at the periods in which the disease is accustomed to recur, or during the continuance of those signs by which a paroxysm is usually preceded.

The THIRD and FOURTH VARIETIES, or anticipating and retarding misemission, are put together by Ploucquet under the name of *ejaculatio intempestiva* §, and are equally entitled to this character: while the former is, by Schenck, denominated *ejaculatio præmatura* ||.

The anticipating or premature variety evinces great nervous irritability in a delicate or relaxed habit; the plethora of the first or entonic variety would produce the best and most effectual cure; but as this is rarely to be accomplished in a constitution of this kind, tonics, a plain but nutritious diet, especially light suppers, and, more especially still, a bidet of cold water before retiring to bed, form the most effectual means of subduing this precession of generative power. In some cases, the afflux has been so quick as to take place even before the vagina has been fairly entered.

The FOURTH OR RETARDING VARIETY forms a perfect contrast to the preceding. It imports a sluggishness either of constitution or of local erethism, in consequence of which the seminal flow does not take place till the orgasm of the female has subsided, and fatigue, perhaps

\* Borelli, Amalth. Med. Hist. p. 161.

† De Sed. et Caus. Morb. Ep. xxvi. Art. 13.

‡ Geneanthropia, p. 794.

§ Imit. Biblioth. Tom. iv. p. 61. 4to. Tubing, 1795.

|| Observ. Lib. iv. Obs. 46.

disgust, has succeeded to desire. Here too, general tonics and local stimulants offer the fairest chance of success; and both sting-nettles \* and flagellations †, as in some cases of organic impotency, are said to have worked wonders. The variety is generally described under the name of bradyspermatismus.

The REFLUENT VARIETY is chiefly introduced upon the authority of M. Petit ‡, whose description has been copied by Sauvages. "It consists," he tells us, "in a reflux of the semen into the bladder or vesiculæ seminales, on account of the narrowness of the urethra, in consequence of which there is no semination during the interunion, and the semen is afterwards discharged with the urine.

This narrowness is common to those who have suffered from frequent blenorrhœas, and have hence contracted strictures or scirrhus indurations in the course of the urethral passage, or have the passage blocked up with indurated mucus. Deidier gives a case not very unlike, consisting of a patient who laboured under a fistula opening from the vesiculæ seminales into the rectum: in consequence of which, though sound in every other respect, whenever he embraced his wife scarcely any of the semen escaped from the penis, nearly the whole passing into the intestine, intermixed with a small quantity of urine; and hence his marriage was sterile §.

In all these cases the cure of the impotency must depend upon a cure of the local cause of constriction. The dyspermatismus *urethralis*, *nodosus* and *mucosus* of Sauvages and Cullen, who has copied from him, are all resolvable into this variety, as proceeding from like causes, and producing a like effect.

GEN. IV.  
SPEC. II.

§ A. Dys-  
spermia  
cunctans.  
Retarding  
misemis-  
sion.

How pro-  
duced.

Mode of  
treatment.

§ A. Dys-  
spermia  
refluens.  
Refluent  
misemis-  
sion.

How pro-  
duced.

Where  
chiefly  
found.

Singular  
case from  
Deidier.

Medical  
treatment.

\* Eph. Nat. Cur. Dec. II. Ann. v. App. p. 55.

† Meibom, and Riedlin, loc. citat.

‡ Memoires de l'Academie de Chirurgie, I. p. 434.

§ Tom. III. Consult. I.

## SPECIES III.

## AGENESIA INCONGRUA.

## Copulative Incongruity.

THE SEMINAL FLUID INACCORDANT IN ITS CONSTITUENT PRINCIPLES, WITH THE CONSTITUTIONAL DEMAND OF THE RESPECTIVE FEMALE.

GEN. IV.  
SPEC. III.  
The species new to nosological arrangement, which has hitherto separated the co-species very remotely.

ALL the species of this genus are closely connected ; yet it is only the first two that have hitherto been noticed by nosologists ; nor is there any preceding system that I am aware of, under which even these two have been introduced into the same subdivision. In almost every instance, indeed, they have been regarded as distinct genera belonging to distant orders or even classes, and arranged with diseases that have little or no relation to them. Thus, in Sauvages impotentia, by him called anaphrodisia, occurs in the second order of his sixth class, united with such diseases as “loss of thirst” and “desire of eating ;” while dysspermia, or dysspermatis-mus is carried forward to the third order of his ninth class. In Cullen these diseases occur, indeed, in the same class, a very improper one, that of LOCALES, but under different orders of this class ; impotentia being arranged under the second order, with the morbid cravings of the alimentary canal, and some of those of the mind, as nostalgia ; and dysspermia being placed under the fifth order entitled *epischeses* or SUPPRESSIONS.

This species derived from actual observations and incidental hints.

The present species is, for the first time, so far as the author knows, introduced into a nosological system ; and is derived from personal observation in full accordance with the scattered remarks of several other writers and practitioners. The principle upon which the species is

founded belongs, strictly, to the general doctrine of conception, and has been already explained in the Physiological Proem to the present class. It will hence be sufficient to throw out a few additional hints for the purpose of bringing the principle more immediately home to the disease before us, and supporting the propriety of its introduction into the general register.

GEN. IV.  
SPEC. III.  
Agenesia  
incongrua.  
Copulative  
incon-  
gruity.

Every one must have noticed occasional instances in which a husband and wife, apparently in sound health and vigour of life, have no increase while together; either of whom, nevertheless, upon the death of the other, has become the parent of a numerous family; and both of whom, in one or two curious instances of divorce, upon a second marriage. In various instances, indeed, the latent cause of sterility, whatever it consist in, seems gradually to diminish, and the pair that for years was childless, is at length endowed with a progeny. In all this there seems to be an incongruity, inaccordancy, or want of adaptation in the constituent principles of the seminal fluid of the male to the sexual organization of the respective female; or, upon the hypothesis of the epigenesis, which we have already illustrated, to the seminal fluid of the female. Writers, strictly medical, have not often adverted to this subject, though it is appealed to, and for the most part with approbation, by physiologists of all ages and countries. Sauvages, however, evidently alludes to and admits such a cause in his definition of dysspermatismus serosus, which is as follows: "Ejaculatio seminis aquosioris, adeoque ad genesim inepti, quæ species est frequentissimum sterilitatis virilis principium." He illustrates his definition by a case which occurred to Haguénot and Chaptal, who attributed it to the cause in question, and refers for other examples to Et-müller. Cullen expresses himself doubtfully upon this species, "De dysspermatismo seroso Sauvagesii," says he, "mihi non satis constat." Yet his own gonorrhœa laxorum, in the present system spermorrhœa atonica, and which he explains "humor plerumque pellucidus, sine penis erectione, sed cum libidine, in vigilante, ex

General  
physiology.

Dyssper-  
matismus  
serosus of  
Sauvages.

Gonorrhœa  
laxorum of  
Cullen.



GEN. IV.  
SPEC. III.  
Agnesia  
incongrua.  
Copulative  
incon-  
gruity.

urethra fluit," makes so near an approach to it, that the physiologist who admits the one can find little difficulty in admitting the other. The resemblance is, indeed, close and striking; in the latter disease the individual labouring under it, emits involuntarily, and *without coition*, or even erection, but with a libidinous sensation, a pellucid fluid, apparently of a seminal character, affirmed positively by Sauvages, from whom Cullen derives his species, and to whom he refers, to be an "effluxus SEMINIS;" while, in the former, the same dilute and effete semen, with difficult, and imperfect erection, is poured forth *during coition*.

Further illustrated.

In like manner, Forestus speaks of a proper gonorrhœa, or involuntary emission of seminal fluid, produced *ex aquositate*\*, from too watery a condition of the secretion: Timæus, of the same disease occasioned *ex semine acri*†, by a secretion of an acrimonious semen: and Hornung, of hysterics occasioned in married women who are sterile from an "immissio *frigidi seminis*‡:" an expression adopted from, or at least employed by, Ballonius§, and supported by Schurig||, and Ab Heer¶.

Pathological illustrations applied to the present species, and its essence pointed out.

The explanation, however, now offered, takes a more comprehensive view of the subject, by supposing that the seminal fluid may be secreted, not merely in a state of morbid diluteness, but, under various modifications, even in a state of health, of such a condition as to render it inadequate to the purposes of generation in female idiosyncracies of certain kinds, while it may be perfectly adequate in those of other kinds. In agricultural language, it supposes that the respective seed may not be adapted to the respective soil, however sound in itself. So, Parr tells us, on another occasion that, "In some in-

\* Lib. xxvi. Obs. 12.

† Cas. p. 188.

‡ Cista. p. 487.

§ Opp. i. p. 120.

|| Spermatologia, p. 21.

¶ Observ. Rar. N. 10.

stances the semen itself seems defective in its essential qualities \*."

Here again, the mode of treatment must be regulated by a close attention to the nature of the cause. In most cases, whatever will tend to invigorate the system generally will best tend to cure the sterility: as a generous diet, exercise, the cold-bath, and particularly the use of the bidet or local cold-bath. With these may be combined the warm and stimulant resins and balsams, as guiacum, turpentine, copaiba; and the oxydes of iron, zinc, and silver.

Abstinence by consent, for many months, has, however, proved a more frequent remedy than any other, and especially where the intercourse has been so incessantly repeated as to break down the staminal strength: and hence the separation produced by a voyage to India has often proved successful.

GEN. IV.  
SPEC. III.  
Agenesia  
incongrua.  
Copulative  
incon-  
gruity.  
Mode of  
treatment.

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\* Diss. Art. Anaphrodisia.

## GENUS V.

## APHORIA.

**Female Sterility. Barrenness.**

## INABILITY TO CONCEIVE OFFSPRING.

GEN. V.  
Origin of  
generic  
term.

APHORIA (ἀφορία) “sterilitas” “infecunditas” from α negative, φέρω “fero,” “pario,” is the term in common use among the Greek writers. It is singular that the morbid condition it imports has no distinct place in any of our most esteemed nosologists. It may possibly be intended under the anaphrodisia of several of them, though in none of them has the genus any one species that expressly applies to female barrenness.

The proper species belonging to it are the following:—

- |    |                   |                                     |
|----|-------------------|-------------------------------------|
| 1. | APHORIA IMPOTENS. | BARRENNESS OF IMPOTENCY.            |
| 2. | ——— PARAMENICA.   | BARRENNESS OF MISMEN-<br>STRUATION. |
| 3. | ——— IMPERCITA.    | BARRENNESS OF IRRESPON-<br>DENCE.   |
| 4. | ——— INCONGRUA.    | BARRENNESS OF INCON-<br>GRUITY.     |

## SPECIES I.

## APHORIA IMPOTENS.

## Barrenness of Impotency.

## IMPERFECTION OR ABOLITION OF CONCEPTIVE POWER.

THIS species runs precisely parallel with the same disease in males already described under *AGENESIA impotens*, and consequently offers us the two following varieties :

- |             |                     |
|-------------|---------------------|
| α Atonica.  | Atonic barrenness.  |
| ε Organica. | Organic barrenness. |

GEN. V.  
SPEC. I.

IN ATONIC BARRENNESS there is a direct imbecility or want of tone, rather than a want of desire : and the ordinary causes are a life of intemperance of any kind, and especially of intemperate indulgence in sexual pleasures, a chronic leucorrhœa, or paralytic affection of the generative organs. It has also been occasioned by violent contusions in the loins, or the hypogastric region, and by over-exertion in walking.

α A. Impo-  
tens ato-  
nica  
Atonic bar-  
renness.  
Causes.

The plan of treatment is to be the same as already laid down under atonic sterility or impotency in males, yet it is seldom that any treatment has afforded success under this variety.

Treatment.

ORGANIC BARRENNESS is produced by some structural hindrance or defect, whether natural or accidental. And this may be of various kinds: for the vagina may be imperforate and prohibit not only all intermission of semen, but an entrance of the penis itself. The ovaria may be defective, or even altogether wanting, or not duly developed, or destitute of ovula; or the fimbriæ may be de-

ε A. Impo-  
tens orga-  
nica.  
Organic  
barrenness.  
Causes.



GEN. V.  
SPEC. I.  
6 A. Impo-  
tens orga-  
nica.  
Impotent  
barrenness.  
Conception  
may occur  
in an im-  
pervious  
vagina if  
the occlu-  
sion be not  
total.

fective, and incapable of grasping the uterus; or the Fallopian tube may be obstructed, or impervious, or wanting; in all which cases barrenness must necessarily ensue. In the case of an impervious vagina, however, unless there be a total occlusion, conception will sometimes follow: for it has occurred where the passage has been so narrow as not to admit the penis; and occasionally indeed, when, with the same impediment, a rigid and unbroken hymen has offered an additional obstacle, of which the medical records contain abundant examples. Ruysset, gives us a singular case of a hymen found unbroken at the time of labour.

In all these instances the hymen seems to have been placed high up in the passage, so as to allow the penis to obtain a curtailed entrance, and to produce its shock; when the occlusion not being complete, a part of the semen has passed through the aperture, and effected its ordinary result.

But the ex-  
amples  
rare.  
Illustrated.

These, however, are rare instances: for the impediment before us is, in common cases, a sufficient bar not only to conception, but to copulation. The author was lately consulted by a very amiable young couple in an instance of this kind, to whom the want of a family was felt as a very grievous affliction. The hymen had a small aperture, but was tense and firm, and the ordinary force of an embrace was not sufficient to break it. He explained the nature of the operation to be performed, and added that he had no doubt of a successful issue. The lady was reluctant to submit herself to the hands of a surgeon, and hence with equal courage and judgement became her own operator. The impediment was completely removed, and she has since had several children.

Vagina it-  
self some-  
times natu-  
rally too  
narrow, or  
narrowed  
by a stric-  
ture.  
Remedial  
process.

In a few instances, however, this will not answer, for there is a natural narrowness or stricture, sometimes found in the vagina, which cannot be overcome, at least without a severer operation than most women could be induced to submit to; that I mean of laying it open through the whole length of the contraction. A sponge

tent, however, gradually enlarged, has sometimes succeeded. Surig gives an account of a dissolution of marriage in consequence of an impediment of this kind\*.

GEN. V.  
SPEC. I.

## SPECIES II.

### APHORIA PARAMENICA.

#### Barrenness of Mismenstruation.

CATAMENIAL DISCHARGE MORBIDLY RETAINED, SECRETED  
WITH DIFFICULTY, OR IN PROFUSION.

It is not always necessary to impregnation that a female should menstruate: for we have already observed† that a retention of menses, or rather a want of menstruation, is not always a disease; but only where symptoms occur which indicate a disordered state of some part or other of the body, and which experience teaches us is apt to arise in consequence of such retention. In some cases, there is great torpitude or sluggishness in the growth or development, or proper erethism of the ovaries, and menstruation is delayed on this account, and in a few rare instances we have remarked that it has occurred for the first time after sixty years of age. It may hence easily happen, and we shall presently have occasion to show that it often has done so, that a woman becomes married who has never been subject to this periodical flux: and although it is little to be expected that she should breed till the sexual organs are in a condition to elaborate this secretion, yet if such condition take place after

GEN. V.  
SPEC. II.  
Menstruation not absolutely necessary to impregnation.  
Explained.

\* Gynæcolog. p. 223.

† Vol. iv. Paramenia obstructionis, p. 44.

GEN. V.  
SPEC. II.  
Aphoria  
paramenia.  
Barrenness  
of mismen-  
struation.  
But a flow  
of catame-  
nia neces-  
sary where  
once estab-  
lished :  
and hence  
menosta-  
tion a cause  
of barren-  
ness.  
Difficult  
menstrua-  
tion a cause  
and why.  
Profuse  
menstrua-  
tion a cause  
and why.

Mode of  
treatment.

marriage, impregnation may instantly succeed and prohibit or postpone the efflux which would otherwise take place\*.

But where there is a manifest retention of the catamenial flux producing the general symptoms of disorder which we noticed when describing this disease, it is rarely that conception takes place, in consequence of the morbid condition of the organs that form its seat.

For the same reason it seldom occurs where the periodical flow is accompanied with great and spasmodic pain, is small in quantity, and often deteriorated in quality. And if, during any intermediate term, conception accidentally commence, the very next paroxysm of distressing pain puts a total end to all hope by separating the germ from the uterus.

But there must be a healthy degree of tone and energy in the conceptive organs, as well as of ease and quiet, in order that they should prove fruitful : and hence, wherever the menstrual flux is more frequently repeated than in its natural course, or is thrown forth, even at its proper time, in great profusion, and, as is generally the case intermixed with genuine blood, there is as little chance of conception as in difficult menstruation. The organs are too debilitated for the new process ; and not unfrequently there is as little desire as there is elasticity.

Having thus pointed out the general causes and physiology of barrenness when a result of mismenstruation, it will be obvious that the cure must depend upon a cure of the particular kind of morbid affection that operates at the time and lays a foundation for the disease, of all which we have already treated under the different species of the genus PARAMENIA, and need not repeat what is there laid down.

---

\* Class v. Order III. Carpotica, Introductory remarks.

## SPECIES III.

## APHORIA IMPERCITA.

**Barrenness of Irrespondence.**STERILITY PRODUCED BY PERSONAL AVERSION OR WANT  
OF APPETENCY.

It is not perhaps altogether impossible, that impregnation should take place in the case of a rape, or where there is a great repugnancy on the part of the female, for there may be so high a tone of constitutional orgasm as to be beyond the control of the individual who is thus forced, and not to be repressed even by a virtuous recoil, and a sense of horror at the time. But this is a possible rather than an actual case, and though the remark may be sufficient to suspend a charge of criminality, the infamy can only be completely wiped away by collateral circumstances.

In ordinary instances, rude, brutal force is never found to succeed against the consent of the violated person. And for the same reason, wherever there is a personal aversion, a coldness, or reserve, instead of an appetency and pleasure, an irrespondence in the feelings of the female to those of the male, we have as little reason to hope for a parturient issue. There must be an orgasmic shock, or percussive sufficient to shoot off an ovulum from its bed, and to urge the fine and irritable fimbriæ of the Fallopian tube to lay hold of the uterus and grasp it tight, by which alone a communication can be opened between this last organ and the ovarium, or the seed cannot reach home to its proper soil, and produce a harvest. So observes the first didactic poet of ancient Rome, addressing himself to the Generative

GEN. V.  
SPEC. III.  
How far  
impregnation may  
take place  
under a  
rape.  
The effect  
possible  
under a  
particular  
kind of  
constitution;

but very  
rare and  
mostly to  
be suspected.

Aversion,  
coldness, or  
reserve prohibit  
conception, and  
why.



GEN. V.  
SPEC. III.  
Aphoria  
impercita.  
Barrenness  
of irres-  
pondence.

Power, in the language not of the voluptuary but of the physiologist:

—per maria, ac monteis, fluviosque rapaceis  
Frundiferasque domos avium, camposque virenteis,  
Omnibus INCUTIENS blandum per pectora amorem,  
Ecfcis, ut CUPIDE generatim secla propagent\*.

So through the seas, the mountains, and the floods,  
The verdant meads, and woodlands fill'd with song,  
SPURR'D BY DESIRE each palpitating tribe  
Hastes, at thy shrine, to plant the future race.

Hence suf-  
ficient  
ground for  
the present  
species.

Important  
lesson to be  
learnt from  
the above  
facts.

The cause is clear, and the effect certain, but it is a disease immedicable by the healing art, and can only be attacked by a kind, assiduous, and winning attention, which, however slighted at first, will imperceptibly work into the cold and stony heart, as the drops of rain work into the pavement. It should teach us, however, the folly of forming family connexions and endeavouring to keep up a family name where the feelings of affection are not engaged on both sides.

#### SPECIES IV.

### APHORIA INCONGRUA.

#### Barrenness of Incongruity.

THE CONCEPTIVE POWER INACCORDANT WITH THE CON-  
STITUENT PRINCIPLES OF THE SEMINAL FLUID RE-  
CEIVED ON THE PART OF THE MALE.

GEN. V.  
SPEC. IV.  
Parallel  
with age-  
nesia incon-  
grua in  
cause,  
effect, and  
mode of  
treatment.

THIS species runs precisely parallel with the third under the preceding genus *AGENESIA incongrua*, and the physiological and therapeutic remarks there offered will equally apply to the present place.

\* De Rer. Nat. i. 17.

## GENUS VI.

## ÆDOPTOSIS.

## Genital Prolapse.

PROTRUSION OF ONE OR MORE OF THE GENITAL ORGANS,  
OR OF EXCRESCENCES ISSUING FROM THEM, INTO THE  
GENITAL PASSAGE; IMPAIRING OR OBSTRUCTING ITS  
COURSE.

ÆDOPTOSIS is a compound term from *αἰδοῖον*, “inguen,” GEN. VI.  
pl. *αἰδοῖα* “pudenda,” whence *αἰδῶς* “pudor,” and *πτῶσις* Origin of  
“lapsus.” In like manner Sauvages and Sagar use generic  
term.  
*Ædopsophia*, applying the term to the meatus urinarius, as  
well as to the uterus. Sauvages, however, expresses the  
present disease, but less correctly, by *hysteroptosis*, for  
this, with strict propriety, can denote only one of the  
species that fall within its range, namely displacement of  
the uterus.

The genus embraces the five following species:

- |                     |                                  |
|---------------------|----------------------------------|
| 1. ÆDOPTOSIS UTERI. | FALLING DOWN OF THE<br>WOMB.     |
| 2. ——— VAGINÆ.      | PROLAPSE OF THE VA-<br>GINA.     |
| 3. ——— VESICÆ.      | PROLAPSE OF THE BLAD-<br>DER.    |
| 4. ——— COMPLICATA.  | COMPLICATED GENITAL<br>PROLAPSE. |
| 5. ——— POLYPOSA.    | GENITAL EXCRESCENCE.             |

## SPECIES I.

## ÆDOPTOSIS UTERI.

## Falling down of the Womb.

## PROTRUSION OF THE UTERUS INTO THE VAGINA.

GEN. VI. THIS may take place in several ways, and hence offers  
SPEC. I. the following varieties :

- |               |                             |
|---------------|-----------------------------|
| α Simplex.    | Simple descent of the womb. |
| ς Retroversa. | Retroverted womb.           |
| γ Inversa.    | Inverted womb.              |

α Æ. uteri  
simplex.  
Simple de-  
scent of the  
womb.  
Relaxatio  
uteri, what?  
Procidentia,  
what?  
Prolapsus,  
what?  
Causes.

Occasion-  
ally found  
in virgins  
and even  
infants.  
Example.

In the FIRST VARIETY, or that consisting of a simple descent of the uterus, the organ retains its proper posture and figure. Different names are frequently given to different degrees of this variety. If the descent be only to the middle of the vagina, it is called *relaxatio uteri*; if to the labiæ, *procidentia*; if lower than the labiæ, *prolapsus*. The distinction is of trifling importance; the causes are the same in all, which are those of debility or violence. The disease is hence most common to women who have had numerous families; but is occasionally met with in virgins after straining, using violent exercise in dancing, or running, and hence sometimes in girls of a very early age. Professor Monro gives an example of its occurring in an infant of not more than three years old, preceded by a regular menstruation, or more probably a discharge of blood, every three weeks or month, from the vagina, accompanied with considerable pain in the belly, loins, and thighs. The case was too long neglected as being supposed of little importance; and the uterus, which at first appeared to be a very small

body just peeping out of the vagina, descended lower and lower, continually increasing in size, till at length it became as big as a hand-ball, and entirely blocked up the passage of the pudendum. At this time the sanguineous discharge had ceased its returns; but a considerable secretion of leucorrhœa supervened. The uterus seems at last to have been strangulated, gangrene ensued, and was soon succeeded by death\*.

GEN. VI.  
SPEC. I.  
Ædoptosis  
uteri.  
Falling  
down of the  
womb.

The disease first shows itself by what is called a bearing down of the womb, which is a slight descent produced by a relaxed state of its ligaments, and its own weight when in an upright position. There is, at this time, an uneasy sensation in the loins, as well as in the inguinal regions, often extending to the labia, and particularly in walking or standing. There is also an augmented flow of the natural mucous secretion in consequence of the local irritation, which by degrees becomes acrimonious, and excoriates the surrounding parts, and is accompanied with an obstinate leucorrhœa. The stomach sympathises with the morbid state of the womb, the appetite fails, the bowels become irregular and flatulent, and the animal spirits are dejected.

History and  
description.

In attempting a cure we must first restore the prolapsed organ to its proper position, and then retain it there, by a support introduced into the vagina, which should be continued till the ligaments of the womb have recovered their proper tone. Various pessaries have been invented for this purpose, but that made of the caoutchouc or elastic gum, with a ligature to withdraw it at option, appears to be one of the most commodious. Astringent injections, as a solution of alum or sulphate of zinc, or even of cold-water, will generally be found useful; as will also spunging the body with cold-water, or using a hip-bath of sea-water. New and rough port-wine, diluted with an equal quantity of cold-water, has proved one of

Curative  
process.  
Restora-  
tion.

Pessaries.

Astringent  
injections  
and other  
tonics.

\* Edin. Med. Essays, Vol. III. Art. XVII. p. 282.



GEN. VI.  
SPEC. J.  
α Æ. uteri  
simplex.  
Simple de-  
scent of the  
womb.  
Scarifica-  
tion or  
incision.

the most valuable injections to which the author has ever had recourse.

Dr. Berchermann in a foreign journal, has recommended a far bolder and more decisive cure, derived from the rash; but successful practice of a woman upon herself. This courageous sufferer having long laboured under a prolapse of the womb, and tried every method in vain, tired out with the continuance of her complaint, cut into the depending substance of the womb with a common kitchen-knife. A considerable hemorrhage ensued; after which, the vessels collapsing, the organ gradually contracted, and ascended into its proper site; and she was radically cured of the disease. Having boasted of her success, the writer informs us that many other women in the neighbourhood, afflicted with the same complaint, applied for her assistance, and derived a like cure from the same operation\*.

In cases where the prolapse depends upon a loose and relaxed condition of the uterus, it is highly probable that this bold practice may often be found to succeed, but it must be useless where the relaxation is seated in the ligaments: and the knife, if employed at all, should be applied to an extirpation of the entire organ, which has lately taken place with success in various cases.

Extirpa-  
tion.

α Æ. uter  
retroversa.  
Retroverted  
womb,  
Cause and  
its mode of  
action.

In the RETROVERTED WOMB, the fundus falls down, and becomes the lower part, sometimes from a morbid weight and enlargement, but more usually from a neglected distension of the bladder between the third and fourth month of pregnancy, at which period the fundus is just heavy enough to fall forward, whenever the cervix is pressed upon and elevated by such distension; though after this period the cervix itself is too heavy to be affected by the bladder in this way, and the entire uterus too much enlarged to fall down in any way. The bladder, in this case, must be carefully evacuated, and kept

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\* Acta Philosophico-Medica Soc. Acad. Scient. Princ. Hassiacæ &to. Giessæ Cattorum.

evacuated by a free use of the catheter, which will give the uterus an opportunity of righting itself. But if this should not take place in two or three days, the obstetric practitioner should endeavour to restore the organ to its proper position by introducing the fingers of one hand into the vagina and two fingers of the other hand into the rectum.

GEN. VI.  
SPEC. I.  
Æ. uteri  
retroversa.  
Retroverted  
womb.  
Treatment.

The WOMB is INVERTED when at the same time that it is displaced or has fallen down, it is turned inside out. This mischievous condition is most commonly produced by unskillfully and violently pulling away the placenta after delivery: and is only to be remedied by a restoration of the uterus to its proper state before it contracts, without which perpetual barrenness must necessarily ensue, and the patient be subject for life to a difficulty of walking, leucorrhœa, ulceration, and the chance of a scirrhus or cancer.

γ Æ. uteri  
inversa.  
Inverted  
womb.  
How pro-  
duced, and  
remedied.

## SPECIES II.

### ÆDOPTOSIS VAGINÆ.

#### Prolapse of the Vagina.

##### PROTRUSION OF THE UPPER PART OF THE VAGINA INTO THE LOWER.

THIS, like the descent of the uterus, may, according to the degree of the disease, be a relaxation, procidence, prolapse, or complete inversion of the organ. Under all which modifications it has a considerable resemblance to a prolapse of the anus. It appears in the form of a fleshy substance protruding at the back part of the vulva, with an opening in the centre or on one side. At first it is soft,

GEN. VI.  
SPEC. II.  
How modi-  
fied.  
Descrip-  
tion.

GEN. VI.  
SPEC. II.  
Ædoptosis  
vaginæ.  
Prolapse of  
the vagina.  
Causes.  
Cured by  
pregnancy;  
In some  
cases scari-  
fication re-  
commen-  
ed.

but, by continued exposure and irritation, it becomes inflamed, indurated, and ulcerated. The urethra is necessarily turned out of its course: and if the catheter be required it should be employed with its point directed backwards and downwards. Its ordinary causes are those of a prolapse of the womb, and it is to be treated by a like plan of astringent injections and general tonics. Pregnancy commonly performs the best cure: and where this fails, Dr. Berchermann, from the success which has accompanied incision in the case of prolapsed uteri, has recommended scarification, which appears well worthy of trial, though the author has not known it put into practice.

### SPECIES III.

## ÆDOPTOSIS VESICÆ.

### Prolapse of the Bladder.

#### PROTRUSION OF THE BLADDER INTO THE URINARY PASSAGE.

GEN. VI.  
SPEC. III.  
Two modi-  
fications  
given by  
Sauvages:  
a protru-  
sion of the  
inner mem-  
brane of the  
bladder:  
and of the  
inner mem-  
brane of its  
neck.  
The first  
modifica-  
tion illus-  
trated.

THIS species is introduced chiefly upon the authority of Sauvages, who gives us two modifications or varieties of it; one in which there is a protrusion of the inner or nervous membrane, in consequence of its separating from the general substance of the bladder, visible in the meatus urinarius, of the size of a hen's egg, subdiaphonous and filled with urine; and the other in which there is a protrusion of the inner membrane of the neck of the bladder into the same passage. He gives a case of the former variety from Noel, who met with it in a virgin, who was from the first peculiarly troubled with a retention of urine, accompanied with frequent convulsive movements.

She soon fell a sacrifice to it, and it was on dissection that the nature of the tunic was clearly proved. M. de Sauvages queries whether on a recurrence of this case it would be most adviseable to make an opening into the protruding sac, or to extirpate it altogether.

GEN. VI.  
SPEC. III.  
Ædoptosis  
vesicæ.  
Prolapse of  
the bladder.

The second variety he tells us is chiefly found among women who have borne many children, or have been injured by blows or other violence on the lower belly. The protruding cyst produced by an inversion of the membrane drops down in the urinary passage to about the length of the little finger, and is sufficiently conspicuous between the labia. Solingen who met with a case of this kind, returned it by a probe, armed at the upper end with a piece of sponge moistened with an astringent lotion; and afterwards endeavoured to retain it in its proper position by a bandage.

The second  
illustrated.

## SPECIES IV.

### ÆDOPTOSIS COMPLICATA.

#### Complicated Genital Prolapse.

PROTRUSION OF DIFFERENT ORGANS COMPLICATED WITH  
EACH OTHER.

FROM the connexion of the uterus and the vagina with the bladder, a prolapse of either of the two former is often complicated with that of the latter, giving us the two following varieties;

GEN. VI.  
SPEC. IV.

α Utero-vesicalis.

Utero-vesical Prolapse.

Prolapse of the uterus  
dragging the bladder  
along with it.



GEN. VI.  
SPEC. IV.  
Ædoptosis  
complicata.  
Complicated geni-  
tal pro-  
lapse.  
General ex-  
planation.

# 6 Vagino-vesicalis.

## Vagino-vesical Prolapse.

Prolapse of the vagina  
dragging the bladder  
along with it.

Under either of these conditions the bladder, being deprived of the expulsive aid of the abdominal muscles, in consequence of its dropping below their action, is incapable of contracting itself sufficiently to evacuate the water it contains: and hence the patient is obliged to squeeze it with her hands or between her thighs.

The causes and mode of treatment have been already described under the two preceding species. The present is the *hysteroptosis composita* of Sauvages.

## SPECIES V.

# ÆDOPTOSIS POLYPOSA.

## Genital Excrescence.

POLYPOUS OR OTHER CARUNCULAR EXCRESCENCE IN THE  
COURSE OF THE GENITAL AVENUE.

GEN. VI.  
SPEC. V.  
Synonyms.

THIS is the polypus *uteri*, and polypus *vaginæ* of authors: but, strictly speaking, they are less polypi than polypous concretions, since the proper polypus is the fleshy excrescence of the nostrils, as already observed in the first volume\*.

The excrescences before us issue both from the uterus and the vagina, and hence form two distinct modifications as follow:

*a* Uteri. Issuing with a slender root  
 Polypus of the womb. mostly from the fundus of  
 the uterus, and more or  
 less elongating into the  
 vagina.

GEN. VI.  
 SPEC. V.  
 Edoptosis  
 polyposa.  
 Genital ex-  
 crescence.

*c* Vaginæ. Issuing from the sides of the  
 Polypus of the vagina. vagina broad and bulbous.

The latter excrescences in an incipient state, and parti-  
 cularly when loose and flabby, are sometimes dispersed  
 by stimulant and astringent applications, or a hard com-  
 press of sponge or any other elastic material: and, if this  
 cannot be accomplished, they must be destroyed by ex-  
 cision or caustics. It is rarely that they have a neck  
 narrow enough for the application of a ligature.

The vaginal  
 polypus  
 sometimes  
 dispersed  
 by stimu-  
 lants and  
 astringents:  
 sometimes  
 cured by  
 excision.

Polypous excrescences of the womb, are, however, a  
 disease of much greater severity; since the stomach suf-  
 fers, in most cases, from sympathy, and consequently the  
 general health, producing all the symptoms we have  
 already noticed under *ÆDOPTOSIS uteri*: which last is not  
 unfrequently a result, if the excrescence be of long con-  
 tinuance, and of considerable weight and magnitude.

Descrip-  
 tion of  
 uterine  
 polypous  
 excres-  
 cences.

They are of all sizes, and of various degrees of hardness,  
 from that of a soft and yielding sponge to that of firm  
 and substantial leather. Though they commonly grow  
 from the fundus of the uterus, they have sometimes been  
 found to sprout from its sides, and even its cervix,  
 shooting down to different depths of the vagina, and oc-  
 cupying it more or less completely according to their  
 extent. They are generally round in shape and compact  
 in structure, intersected by membranes running in dif-  
 ferent directions. Sometimes, however, they are oblong,  
 in which case they usually consist of a loose irregular  
 texture with numerous interstitial cavities. Dr. Baillie,  
 has given various examples of this diseased production  
 in his tables of *Morbid Anatomy*\*.

Of all sizes  
 and various  
 consisten-  
 cies.

Shape.

They have been attempted to be removed in different

Mode of  
 treatment.

\* See especially *Fascie*, c. ix. Plate iv. 1.

GEN. VI. ways, as by caustics, excision, laceration, and ligature.  
SPEC. V. The last, however, is the only method unaccompanied  
Ædoptosis with danger or uncertainty. Yet even this can rarely be  
polyposa. had recourse to while the excrescence continues in the  
Genital ex- womb; and hence, the usual method is to defer the ope-  
crescence. ration till, from its increase of size and weight, it has  
Treatment. descended into the vagina, when the removal cannot  
be attempted too soon. They have sometimes dropped  
off spontaneously, the peduncle having probably decayed  
or shrivelled away.

## CLASS V.

## GENETICA.

## ORDER III.

## CARPOTICA.

**Diseases affecting the Impregnation.**

THE ordinal term CARPOTICA, is derived from καρπός, "fructus," whence κάρπωσις, "fruitio."

In the Physiological Proem to the present Class, we have taken a brief survey of the laws and general process of generation so far as we are acquainted with them. Impregnation constitutes a part, and the most important part, of this wonderful economy, and, from the changes that the body undergoes during its action, it can never be surprizing that it should often give rise to various diseases. These diseases may be arranged under four genera; including, those which occur during the progress of pregnancy; those which occur during the progress of

CLASS V.  
ORDER III.  
Origin of  
ordinal  
term.  
Genera of  
diseases ac-  
company-  
ing impreg-  
nation.



CLASS V.  
ORDER III.  
Carpotica.  
Diseases  
affecting  
the impreg-  
nation.

labour; conceptions misplaced; and spurious attempts at conception; the whole of which may be thus expressed:

I. PARACYESIS.	MORBID PREGNANCY.
II. PARODYNIA.	MORBID LABOUR.
III. ECCYESIS.	EXTRA-UTERINE FETATION.
IV. PSEUDOCYESIS.	SPURIOUS PREGNANCY.

Physiologi-  
cal princi-  
ples expla-  
natory of  
impregna-  
tion.

In the preceding Physiological Proem, we have shown that, in order for impregnation to take place, it is necessary the semen of the male should pass from the vagina to the one or other of the ovaries by means of the Fallopian tubes which lay hold of the uterus by their very fine and sensible fimbriæ, or fringed extremities, with a sort of spastic grasp during the high-wrought shock of the embrace, and thus alone open a path-way for the semen to travel in.

Use of a  
pair of  
ovaries in  
increasing  
the pro-  
ductive  
power in  
quadru-  
peds.  
Illustrated  
from J.  
Hunter.

The two ovaries are not merely intended to supply the place of each other, in the event of one being wanting or defective, but, like the testes in men, they seem to increase the extent of the productive power, and enable a female to bear a larger offspring than she would do, if she were possessed of one ovary alone. Mr. John Hunter has put this to the test by comparing the number of young produced by a perfect sow with those of a sow spayed of one ovary, both of the same farrow, and impregnated by a boar of the same farrow also. The spayed sow continued to breed for four years, during which period she had eight farrows producing a total of seventy-six young. The perfect sow continued to breed for six years; during the first four of which she also had eight farrows producing a total of eighty-seven young: and during the two ensuing years she had five more farrows producing a total of seventy-five young, in addition to those of the first four years \*. So that, if we may judge from this single experiment, the use of two ovaries, in equal health and activity, enables an animal to breed both

\* Animal Economy, p. 157.

more numerous, and for a longer period of time, than the possession of one alone.

Among women, however, the extent of fecundation does not seem to be much interfered with by the defect of a single ovarium, or its means of communication with the uterus, according to a paper of Dr. Granville read before the Royal Society, April 16, 1813, containing the case of a female whose uterus was found after death to have had but one set of the lateral appendages, and, consequently, a connexion with but one ovarium, and who, nevertheless, had been the mother of eleven children, several of each sex, with twins on one occasion.

After impregnation has taken place, the membranes produced in the uterus form a complete septum, and, consequently, a bar to the ascent of any subsequent flow of semen, so as to prohibit the possibility of two or more successive impregnations co-existing in any part of the uterus during the period of a determined gravidity. Children, indeed, have been born within a few weeks, or even months, of each other, and hence a colour has been given to the hypothesis that they may be conceived at different periods of a common parturition, and such births have, in consequence, been distinguished by the name of SUPERFETATIONS; but we shall have occasion hereafter, when treating of a plurality of children, to show that fetuses thus born in succession, however they may vary in size or maturity, are real twins, conceived at one and the same time, from the descent of a plurality of ovula into the uterus, instead of a single one, and that the difference of size or maturity depends upon some unknown cause in the dead or puny fetus, which has killed it or prevented its keeping pace with the other.

Women are in general capable of breeding as soon as they begin to menstruate, which is the ordinary proof that the organs of conception are fully developed and perfected: and since this discharge, as we have remarked in the Proem just referred to, commences sometimes in very early life, and particularly in hot climates, where it has occurred in girls of not more than nine years of age,

CLASS V.  
ORDER III.  
Carpotica.  
Diseases affecting the impregnation.

This case does not seem equally applicable to women.

After impregnation the womb closed by a septum: and hence no possibility of superfetation.

Hence children born within a few months of each other real twins, conceived at the same time. Difference of kind of birth accounted for. Women capable of breeding as soon as they menstruate: and hence sometimes of breeding at nine years of age.

CLASS V.  
ORDER III.  
Carpotica,  
Diseases  
affecting  
the impreg-  
nation.  
Illustrated.  
Menstrua-  
tion not  
absolutely  
necessary  
for impreg-  
nation, and  
why?

Exempli-  
fied.

Difference  
of opinion  
concerning  
the exact  
term of  
female  
pregnancy,  
in the  
judgement  
both of  
legislators  
and physi-  
cians.

so we have instances of conception and pregnancy having commenced as early. Baron Haller\* and professor Schmidt †, concur in examples of pregnancy at nine years old: and the medical records confirm these singular histories by numerous instances of a like kind ‡.

Yet, though menstruation is the ordinary proof that the conceptive powers have acquired a sufficient finish and vigour for their proper function, menstruation itself is not absolutely necessary for impregnation. As there are circumstances that hurry on this secretion before its ordinary term of appearance, there are others that delay it, insomuch that some women pass through a long life without menstruating at all, while others only begin after reaching an adult age, and others again not till the period in which it usually ceases. Now, it may happen that a woman whose peculiar habit produces a peculiar retardation of menstruation, may marry before this secretion takes place for the first time; and, as we have just observed that she is able to breed as soon as ever she is able to menstruate, the former process may anticipate the latter, and postpone it till the term of pregnancy has been completed. "A young woman," says Sir Everard Home, "was married before she was seventeen, and, although she had never menstruated, became pregnant: four months after her delivery she became pregnant a second time, and four months after the second delivery she was a third time pregnant, but miscarried: after this she menstruated for the first time, and continued to do so for several periods, and again became pregnant §."

There is much difference of opinion as to the period of pregnancy in the human female; for while other animals seem to observe great punctuality upon this subject, we meet with so many and such considerable varieties in women, that legislators, as well as physicians, have not

\* Vide Blumenbach, Bibl. i. p. 558.

† Act. Helvet. iv. 162.

‡ Eph. Nat. Cur. Dec. III. Ann. II. Obs. 172.

§ Phil. Trans. 1817, p. 258.

agreed in assigning a common term. Hippocrates rules it that we should admit the possibility of a child being born at ten months, but not later, which is the common term assigned in the book of the Apocrypha entitled Wisdom of Solomon \*; while Haller gives references to women who are said to have gone not only ten but eleven, twelve, thirteen, and even fourteen months; most of which, however, are of a suspicious kind. Twelve months, nevertheless is a term allowed by many physicians, as what may take place under peculiar weakness or delicacy of health †; and yet it is most probable that in all these the mother is mistaken as to the proper time of her conception, and imagines herself to have commenced pregnancy for some weeks or even months before it actually takes place. The state of menstruation affords no full proof; for as conception may occur without its appearance, so it may continue for many months or even during the whole term of pregnancy, though most commonly in a smaller quantity than usual. There is a singular case in the *Histoire de l'Academie des Sciences*, of a living child born after what is said to have been three years of pregnancy ‡. Few reports of this kind are worth attending to, or entitled to any kind of explanation: but it has sometimes happened, and probably did so in this last case that a woman conceits herself to be in a state of pregnancy, and has various symptoms that simulate it, for a twelvemonth or considerably more than a twelvemonth, and particularly towards the cessation of the catamenia, instances of which we shall have occasion to notice under the fourth genus of the present order, entitled PSEUDOCYESIS or spurious pregnancy: and if, after such a simu-

CLASS V.  
ORDER III.  
Carpotica.  
Diseases  
affecting  
the impreg-  
nation.

Many extend to twelve-months according to some: and under what circumstances. This view of the case probably a mistaken one. Explained.

In what sense a child said to be born after three years of pregnancy.

\* Chap. vii. 2.

† Büchner, *Miscell.* 1727, p. 170.

Enguin, *Journ. de Med.* Tom. LXI.

Brambilla, *Abhandl. der Joseph. Acad.* Band. I. p. 102.

Telmout de St. *Journ. de Med.* Tom. XXVII.

Ploucquet, *Von den physischen Erfordernissen der Erbfähigkeit der Kinder*, p. 69. Treb.

‡ *Hist. de l'Academie des Sciences*, 1753, p. 206.



CLASS V.  
ORDER III.  
Carpotica.  
Diseases  
affecting  
the impreg-  
nation.  
In the code  
Napoleon  
300 days.

Question of  
the Ban-  
bury peer-  
age.

How differ-  
ent periods  
established  
by different  
legislators.  
Child may  
be legiti-  
mate at five  
months, as  
determined  
by the  
faculty of  
Leipsic.  
Ordinary  
calculation  
of time in  
Britain,  
nine calen-  
der months  
or forty  
weeks.

Figure and  
position of  
uterus  
during

lation continued for a year or two, the woman should fall into a state of real pregnancy, she may persuade herself at the close of the process that she has been pregnant for the whole of this time.

By the code Napoleon, the legitimacy of a child born three hundred days after a dissolution of marriage may be questioned. In our own country the law is to this hour in an unsettled state; and much nicety of argument has frequently taken place; of which an example was afforded in the famous question of the Banbury peerage, upon a new raised distinction of access and generative access. There can be no doubt, however, that a considerable difference in duration may ensue from the state of the mother's health: for as the fetus receives its nourishment from the mother, there is a probability that various deviations from health may retard the maturity of the fetus. And it is probably on this account that different legislators have assigned different periods of legitimacy; one of the shortest of which is that determined upon by the faculty of Leipsic, who have been complaisant enough to decide, that a child born five months and eight days after the return of the husband, may be considered as legitimate; and that a fetus at five months is often a perfect and healthy child.

In the ordinary calculation of our own country, the allowed term does not essentially differ from that in the code Napoleon, for it extends to nine calendar months or forty weeks: but as there is often much difficulty in determining the exact day between any two periods of menstruation in which semination has taken effect, it is usual to count the forty weeks from the middle of the interval before it ceases; or, in other words, to give a date of forty-two weeks from the last appearance of the menses: and at the expiration of this term, within a few days before or after, the labour may confidently be expected.

In the progress of pregnancy the figure of the uterus, as well as its position, changes considerably. Before the end of the third month it has a tendency to dip towards

the pelvis, at which period it may be felt to ascend: during the seventh month it forms a line with the naval; in the eighth month it ascends still higher, reaching midway between this organ and the sternum; and in the ninth it almost touches the ensiform cartilage; at the close of which, as though overwhelmed by its own bulk, it begins again to descend, and shortly afterwards, from the irritation produced by the weight of the child, or, more probably, from the simple law of instinct, it becomes attacked with a series of spasmodic contractions extending to the surrounding organs, which constitute the pains of labour, gradually increase in strength, enlarge the mouth of the organ, and protrude the child into the world.

In natural pregnancy, a strong hearty woman suffers little considering the great change which many of the most important organs of both the thorax and abdomen are sustaining; and in natural labour, though the returning pains are violent for several hours, there is little or no danger. But numerous unforeseen circumstances may arise from the constitution of the mother, the shape of the pelvis, the figure or position of the child, to produce difficulty, danger, and even death.

In describing the diseases which appertain to the whole of this period, it is not the author's design to do more than to take a general pathological survey, so as to communicate that kind of knowledge upon the subject which every practitioner of the healing art should be acquainted with, even though he may not engage in the obstetric branch of his profession. The minuter and more practical parts, and especially those which relate to the application of instruments and the mechanical means of assistance, must be sought for in books and lectures expressly appropriated to this purpose, with which it is not his intention to interfere.

CLASS V.  
ORDER III.  
Carpotica.  
Diseases affecting the impregnation.  
pregnancy at different periods.  
Closing with labour-pains.

In natural pregnancy and strong health little suffering: and in natural labour little danger. But danger may arise from numerous circumstances. Limited scope intended by the author in describing the diseases hence ensuing.

## GENUS I.

## PARACYESIS.

*Morbid Pregnancy.*

THE PROGRESS OF PREGNANCY DISTURBED OR ENDANGERED BY THE SUPERVENTION OF GENERAL OR LOCAL DISORDER.

GEN. I.  
Origin of  
generic  
term.

THE generic term is derived from *παρὰ*, "male," and *κίνησις*, "graviditas." The genus will conveniently embrace the three following species, according as the general system, or organs distinct from those immediately concerned, are disturbed; as the sexual organs themselves are disturbed; or as the fruit itself is disturbed and extended prematurely:

- |    |                        |  |
|----|------------------------|--|
| 1. | PARACYESIS IRRITATIVA. | CONSTITUTIONAL DERANGEMENT OF PREGNANCY. |
| 2. | ———— UTERINA.          | LOCAL DERANGEMENT OF PREGNANCY.          |
| 3. | ———— ABORTUS.          | MISCARRIAGE. ABORTION.                   |

## SPECIES I.

## PARACYESIS IRRITATIVA.

**Constitutional Derangement of Pregnancy.**

PREGNANCY EXCITING DISTRESS OR DISTURBANCE IN  
OTHER ORGANS OR FUNCTIONS THAN THOSE PRIMA-  
RILY CONCERNED.

THE new condition of the womb operates upon the whole or different parts of the system in various ways. We have frequently had occasion to observe that there is no organ whatever which exercises a more extensive control over the entire fabric than the uterus, with the exception of the stomach, and hence many parts are affected by sympathy during its new action, and particularly the brain and the whole of the nervous function. But its change of shape, bulk, and position, operates mechanically on other organs and frequently produces serious mischief by pressure or irritation; these organs are chiefly the stomach itself, the lungs, the intestinal canal, and the veins of the legs. And hence the evils resulting from these causes, may be contemplated under the following varieties:

GEN. I.  
SPEC. I.  
Various organs affected directly or indirectly by the new state of the womb:

whence the following varieties:

- |               |  |
|---------------|--|
| α Systatica.  | Accompanied with faintings, palpitations, convulsions, or other direct affections of the nervous system. |
| β Dyspeptica. | Accompanied with indigestion, sickness, and head-ache.   |
| γ Dyspnoica.  | Accompanied with difficult breathing and occasionally a cough.   |



GEN. I.  
SPEC. I.  
Paracyesis  
irritativa.  
Constitutional derangement  
of pregnancy.

α P. irritativa systatica.

Nervous ailments of pregnancy.  
Nervous system sympathizes at all times with the sexual organs; but particularly in delicate habits and on what account: predisposing to palpitation, syncope, and convulsions.

Palpitation often an effect.

δ Alvina.

ε Varicosa.

Accompanied with derangement of the alvine canal, as costiveness, diarrhoea, or hemorrhoids.  
Accompanied with venous dilatation of the lower extremities.

That the nervous system should often suffer severely, and in various ways during pregnancy, will not appear singular to those who have attended to the remarks we have already made concerning the close chain of sympathy that prevails between the brain and the sexual organs, from the time of the first developement of the latter to their becoming torpid and superannuated on the cessation of the catamenia. But in delicate habits, in which these nervous affections chiefly occur, there is another cause, which is even more powerful than the preceding; and that is the demand of an additional supply of sensorial power in support of the new process, and, consequently, an additional excitement and exhaustion of the sensorium, persevered in without intermission, and increasing from day to day. This excitement and exhaustion necessarily produce weakness; and of course an irregularity in the flow, and particularly in the alternating pauses, of the sensorial current; hereby predisposing alike to palpitation of the heart, clonic spasms, and convulsions, according to the law of physiology laid down under the genus CLONUS\*, to which the reader may return at his leisure. Fainting, as has also been previously shown under the genus SYNCOPÉ †, is dependent upon the same deficiency of action, rendered more complete, or more protracted in duration.

PALPITATION, in the case before us, is rarely attended with danger, but is often a most distressing symptom. It returns irregularly in the course of the day or night, but particularly after a meal, and very frequently on

\* Vol. III. p. 395.

† Vol. III. p. 505.

first lying down in bed. In the capricious state of the nervous system at this time, its return after meals does not seem to be so much dependent upon the nature of the food as upon the state of the stomach at the moment: it has recurred after a light and plain dinner, and been quiet after a more stimulant dinner; and then for a few days has been most severe after the latter, and least so after the former; for a short time the digestion has gone on tranquilly under both, and then again excited palpitation, and perhaps in an equal degree under both: nor has a total abstinence from solid animal food afforded any relief. The pulsatory action is sometimes confined to the heart, sometimes alternates with the coeliac or some other arterial trunk in the abdomen, and sometimes with the temporal arteries. While writing this sheet, the author is occasionally consulted by a lady now in her sixth month, who has been most grievously afflicted with this affection from the time of her beginning to breed, and who will probably be subject to it till her confinement. None of the antispasmodics afford much, if any relief; camphor, in large doses, is found the best palliative; the narcotics have all been tried in vain; opium maddens the head and throws out a most distressing lichenous rash. The paroxysms usually continue from two to six or eight hours. Other irritations produce it, as well as those of the stomach, and especially any sudden emotion of the mind.

SYNCOPE or fainting occurs during any period of pregnancy, but chiefly in the stage of the first three months, and especially about the time of quickening. After this period the general frame acquires a habit of accommodation to the change that has taken place, and is less easily affected. It is ordinarily produced by more than usual exertion, exposure to heat, or any sudden excitement of the mind. It is sometimes of short duration, and the patient does not lose her recollection; but in other instances it continues for an hour or upwards. A recumbent position, pungent volatiles, sprinkling the face with cold water, and a free exposure to air, with a

GEN. I.  
SPEC. I.  
α P. irrita-  
tiva systa-  
tica.  
Nervous  
ailments of  
pregnancy.  
Description  
of its  
course,  
which is  
frequently  
irregular.  
Pulsatory  
action  
sometimes  
confined to  
the heart:  
sometimes  
alternates  
with the  
larger arte-  
ries.  
Illustrated.

Syncope or  
fainting  
often an  
effect.  
Course and  
description.

Exciting  
causes.

Remedial  
treatment.

GEN. I.  
SPEC. I.  
α P. irrita-  
tiva systa-  
tica.

Nervous  
ailments of  
pregnancy.  
Treatment.

Convulsions  
often an  
effect.

Causes.

Danger at  
all times  
double: that  
of apo-  
plexy:  
and that of  
abortion.

Medical  
treatment.

Bleeding in  
all cases  
entonic or  
atonic, and  
why?

but the  
quantity of  
blood ab-  
stracted to  
vary ac-  
cording to  
circum-  
stances.

In weakly  
habits  
sometimes  
cupping  
alone.

Opium  
afterwards.

moderate use of cordials, offer the speediest means of recovery. The extremities, however, should be kept warm, and the friction of a warm hand applied to the feet.

One of the worst ailments that ever accompanies the process of gestation is that of CONVULSIONS. They may occur at any period of this process, and their exciting causes are not always manifest. The predisposing causes are general weakness or irritability of the nervous system, a constitutional tendency to epilepsy, or any other clonic spasm, and entonic plethora. In all these cases there is a double danger; for we have to dread apoplexy from a rupture of blood-vessels in the head; and abortion or premature labour from an extension of the spasmodic action to the uterus. No time, therefore, is to be lost, and the remedial process must be as active as it is instant.

Bleeding must be had recourse to immediately, as well in the atonic as in the entonic form of the disease. In the first, indeed, it is of itself an evil, for it will add to the general weakness; but as there is already, or, by a repetition of the fit, will unquestionably be, a considerable determination to the head, and more especially as the vessels in an atonic and relaxed frame yield easily as well to anastomosis as to rupture, it will be a far greater evil to omit it. The quantity of blood, however, that it may be adviseable to abstract, must be determined by the concomitant symptoms so far as they relate to the head. Generally speaking, in weakly habits, the head is only affected secondarily, or by sympathy with the irritation of the uterus, where convulsions make their appearance; and hence bleeding, in such cases, is to be employed rather as a prophylactic than as an antidote: and it may be sufficient to confine ourselves to the operation of cupping; at the same time opening the bowels by a sufficient repetition of some laxative. After this opium must be chiefly trusted to, if the spasms still continue: and, on their subsidence, or in their interval, the metallic tonics should be introduced with the warmer bitters.

Where, however, the constitution is robust, and the convulsions have been preceded, as is often the fact in this case, by a tensive or even heavy pain in the head, vertigo, illusory corruscations before the eyes, or illusory sounds in the ears, the encephalon is itself the immediate seat of disease, and the bleeding even in the first instance should be followed up to fainting, or at least till twenty ounces are drawn away, which it will frequently be necessary to repeat within twenty-four hours afterwards; and, if the practitioner be a skilful operator, it will be better to abstract the blood from the jugular vein, as the good effect will be sooner felt. The hair should be shaved from the head and ice-water or other frigid lotions be applied, and very frequently renewed. The bowels must at the same time be purged vigorously, and dilute farinaceous food constitute the whole of the diet. Opium should be abstained from, at least till the general strength is reduced to an atonic state, when if the paroxysms should still return, it may be had recourse to in conjunction with antimonial powder or some other relaxant.

When, in despite of all this treatment, apoplexy has taken place, and is followed by a palsy of a particular organ, or of an entire side, it will often be found that the paralytic affection will continue through the whole course of the pregnancy, and entirely disappear afterwards.

SICKNESS, HEART-BURN, and other symptoms of INDIGESTION are still more common affections than those of the nervous system we have first noticed. These are chiefly troublesome in the commencement of pregnancy, and evidently prove that they proceed not from any mechanical pressure, either direct or indirect, against the coats of the stomach, but from mere sympathy with the new and irritable state of the uterus: for, as the novelty of this state wears away and the stomach becomes accustomed to it, the sickness and other dyspeptic symptoms subside gradually, and are rarely troublesome even when in the latter months of pregnancy the uterus has swollen

GEN. I.  
SPEC. I.  
α P. irritativa systatica.  
Nervous ailments of pregnancy.  
Treatment.  
In strong habits bleeding should be pursued to fainting: and sometimes repeated.  
Jugular vein the best.  
Frigid applications.  
Aperients.  
Opium to be abstained from, at least till the system is reduced.  
If palsy follow, often continues through life.  
ε P. irritativa dyspeptica.  
Dyspeptic ailments of pregnancy.  
Their cause, progress, and the cessation of many of them.



GEN. I.  
SPEC. I.  
& P. irrita-  
tiva dys-  
peptica.  
Dyspeptic  
ailments of  
pregnancy.  
Treatment  
Moderate  
venesection  
or  
leeches to  
the epigas-  
trium.

Gentle  
laxatives  
and cooling  
regimen.

Vomiting  
seldom pro-  
duces evil,  
though  
sometimes  
endangers  
miscar-  
riage.

P. irrita-  
tiva dys-  
pnoica.  
Dyspnetic  
ailments of  
pregnancy.  
Symptoms  
described.  
Mode of  
treatment.

to its utmost extent, from a length of three inches to that of twelve, and has risen nearly as high as the sternum.

The head-ache which occurs as a dyspeptic symptom, is of a very different kind from that we have just noticed, and is rarely relieved by very copious bleedings, though the whole of these symptoms are occasionally mitigated by a loss of eight or nine ounces of blood from the arm, or the application of leeches to the epigastric region as recommended by Dr. Sims, and M. Lorentz. Cloths wetted with laudanum and applied to the pit of the stomach have also been found serviceable in various cases: but the most efficacious means consist in the employment of gentle laxatives, and a very light diet, to which may be added the use of the aerated alkaline waters or saline draughts, in a state of effervescence.

The fluid discharged from the stomach on these occasions is usually limpid, thin, and watry; but where there is much straining a little bile is thrown up at the same time. It is rarely that this kind of vomiting produces any serious evil; though when it has become very obstinate, as well as very severe, it has sometimes endangered a miscarriage. The other symptoms of dyspepsy usually cease with this and are rather disquieting than sources of any degree of alarm. They may often be palliated by some of the means already recommended under LIMOSIS, CARDIALGIA\*, and DYSPEPSIA†.

The chief symptoms of DYSPNŒA that become troublesome during pregnancy are occasional fits of spasmodic anhelation. These are mostly common to those whose respiratory organs are naturally weak, or who are predisposed to hysteria. The paroxysms are of short duration and usually yield with ease to the warmer sedatives and antispasmodics. A dry and troublesome cough, however, is sometimes combined with this state of

\* Vol. I. p. 126.

† Vol. I. p. 153.

the chest, that, if violent, endangers abortion, and has occasionally produced it. Bleeding will here also be adviseable as the first step in the curative process. Eight ounces of blood will suffice, but the depletion must be repeated at distinct intervals if the cough should continue unabated. Gentle laxatives should succeed to the bleeding and be persevered in as the bowels may require. And to these may be added the mucilaginous demulcents already recommended in idiopathic cough, united with such doses of hyoscyamus, conium, or opium as are found best to agree with the state of the constitution\*. There is little danger, however, of this cough terminating in consumption however troublesome and obstinate it may be in itself, for it is rarely that two superadded actions go forward in the constitution at the same time: and hence, as we already have had occasion to observe, whenever pregnancy takes place in a patient labouring under phthisis, the progress of the latter disease is arrested, till the new process has run its course†.

GEN. I.  
SPEC. I.  
γ P. irritativa dyspnoica.  
Dyspnetic ailments of pregnancy.  
Treatment.

If there be cough it rarely terminates in consumption, and why?

DERANGEMENTS OF THE ALVINE CANAL under some modification or other, accompany most cases of pregnancy, are often very distressing, and by their irritation sometimes hasten on labour pains before their time.

δ P. irritativa alvina.  
Alvine ailments of pregnancy.

These affections are of two very opposite kinds. In some instances the intestines participate in the irritability of the uterus, the peristaltic action is morbidly increased, and there is a troublesome diarrhœa. In others the larger intestines appear to be rendered torpid partly by the share of sensorial power which is taken from them in support of the new action, and partly by the pressure of the expanding uterus on their coats. In both cases piles are a frequent attendant, but particularly in the last.

Diarrhœa.  
Costiveness.

The diarrhœa varies in different individuals from a looser flow of proper feces to a muculent secretion, or a defection of dark coloured offensive stools, accompanied

Treatment of diarrhœa.

\* Vol. I. p. 511. 520.  
† Vol. II. p. 788.

GEN. I.  
SPEC. I.  
P. irrita-  
tiva alvina.  
Alvine  
ailments of  
pregnancy.

Treatment  
of costive-  
ness.

P. irrita-  
tiva vari-  
cosa.  
Varicose  
ailments of  
pregnancy.

How to be  
palliated.

with a foul tongue and loss of appetite. The first modification requires no remedy, and may be safely left to itself. The second and third import a morbid action of the excretories of the intestines, and are best relieved by small and repeated doses of rhubarb with two grains of ipecacuan to each \*, and afterwards by infusions of cascarrilla, orange-peel, or any other light aromatic bitter.

The costiveness must be carefully guarded against by such aperients, as are found upon trial to agree best with the bowels. Where acidity in the stomach is suspected, magnesia may be employed, and will often prove sufficient: but where this does not exist, the senna electuary, Epsom salts, or castor oil, will be found to answer much better. The piles will usually disappear as soon as the bowels are restored to a current state: and, if not, they should be treated according to the plan already laid down under PROCTICA MARISCA †.

VARICOSE DILATATIONS of the veins of the lower extremities are a frequent, though not often a very troublesome accompaniment of pregnancy. They are chiefly found in women whose occupation obliges them to be much on their feet. Where the affected veins are first perceived to enlarge, the varicose knots may generally be prevented by exchanging the accustomed erect position for a recumbent one, and using the legs but little. Where the varices are actually formed, the legs may be supported with a bandage drawn only with such moderate pressure as to afford sustentation; for if carried beyond this we shall only endanger a worse congestion in some other part not equally guarded against. For the rest the reader may turn to EXANGIA VARIX, in a preceding part of this work ‡.

\* Burns, Principles of Midwifry, p. 154.

† Vol. I, p. 345.

‡ Vol. II, p. 900.

SPECIES II.

PARACYESIS UTERINA.

Local Derangement of Pregnancy.

PREGNANCY DISTURBED OR ENDANGERED BY SOME DISEASED AFFECTION OF THE UTERUS.

IN the progress of this work, we have seen that on the commencement and through the course of impregnation the periodical secretion of the uterus is suspended; that the organ gradually enlarges from its ordinary size till, in the ninth month, it measures ten or twelve inches from top to bottom, and that, in the course of this enlargement, it changes its position according to a law that is never departed from in a state of health.

GEN. I.  
SPEC. II.  
General changes produced in the uterus during gestation,

In a state of morbid action, however, or from some accidental injury, the uterus does not always maintain its proper position, nor abstain from throwing forth not only its ordinary and natural secretions, but other fluids of a morbid character; and hence becomes subject to several varieties of affection of which it may be sufficient to notice the following:

and occasional ailments to which they lead.

- α Retroversa. Retroversion of the uterus.
- ε Leucorrhœica. The uterus secreting, or exciting in the vagina a secretion of, leucorrhœa, so as to produce debility.
- γ Catamenica. The catamenia continuing to recur.
- δ Hæmorrhagica. Accompanied with hemorrhage.

A RETROVERSION OF THE UTERUS may be produced in various ways, though it is seldom found except in pregnancy, and between the third and fourth month of this state. This organ, notwithstanding its appendages

α P. uterina retro-versa.  
Retroversion of the uterus.



GEN. I.  
SPEC. II.  
α P. uterina retro-  
versa.  
Retrover-  
sion of the  
uterus.  
Described.

of broad and round ligaments is still left pendulous in the hypogastrium: and hence, if the fundus or broad and upper part happen, by a scirrhus induration, or pregnancy, or any other means, to acquire a certain bulk and weight, and if at the same time the cervix, or lower and narrow part, be pushed on one side by any accidental force, as that of the bladder when distended, the broad and upper part will tumble downward, while the narrower part ascends and takes its place. It is this which constitutes a retroverted uterus; but as it occasionally occurs under other states than that of pregnancy we have treated of it already, under the genus *ÆDOPTOSIS UTERI*, where we have stated the mode of treatment to be adopted in the case before us.

ε P. uterina leucorrhœica.  
Leucorrhœa.  
Description.

*LEUCORRHŒA* is a result of the increased action excited in every part of the uterus, or of the upper part of the vagina which is inflamed by continuous sympathy. We have already observed that the mucous discharge denominated leucorrhœa, or whites, appears to be secreted from the lower part of the uterus, and the upper part of the latter organ\*: and hence any excitement operating on the fundus of the womb may be easily conceived under a particular condition of the cervix of the uterus and the vagina, or of the system generally, capable of producing this secretion in considerable abundance.

When treating of leucorrhœa as an idiopathic affection we remarked that where the discharge is excessive it produces considerable debility of the system generally, and of the sexual and lumbar region more particularly: and that when it becomes chronic, it often degenerates into an acrimonious condition and occasions great disquiet by excoriating the cuticle to a considerable extent.

Both these evils are consequent upon its occurrence in pregnancy, and the first has, occasionally, threatened abortion. They are to be relieved by the remedial

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\* Vol. iv. Class v. Ord. i. Gen. ii.

process already pointed out under the genus *LEUCORRHŒA* in the first order of the present class \*.

A continuance of the *CATAMENIAL DISCHARGE* at the regular periods, is also, in many cases of delicate habits, a source of great weakness and discomfort, and sometimes endangers miscarriage or premature labour: in all which instances it ought to be checked by a recumbent position, and particularly a little before the time in which it may be expected, and by the other means already enumerated under *PARAMENIA SUPERFLUA* in the present class †. It has sometimes continued, however, in strong and vigorous habits through the whole period of pregnancy without any serious mischief ‡; though, even here, it has usually been found to produce general debility, and many troublesome dyspeptic symptoms.

Hemman§ and several other writers give cases of women who have never menstruated except when in a state of pregnancy: such is the degree of irritation which the secretories of the uterus, in some instances, demand, in order to be roused into a due performance of their function. So, some persons can only see on a full exposure to a meridian light ||, and others can only hear when the tympanum is irritated by the noise of a drum or of a carriage, sufficient to deafen all the world around them ¶.

*HEMORRHAGE* from the uterus is sometimes connected with this irregular return of the periodical discharge, as we have already observed it is not unfrequently in an unimpregnated state of the organ. In both cases this is usually a consequence of great general debility, and it is hence the more alarming in any period of parturition, as risking the loss of the uterine fruit. In the delicacy of habit we are now contemplating, bleeding would only

GEN. I.  
SPEC. II.  
P. uterina leucor-  
rhoica.  
Leucor-  
rhoica.  
Treatment.  
Recurrence  
of menstrua-  
tion a fre-  
quent evil.

In vigorous  
habits con-  
tinues  
sometimes  
without  
mischief.

Some have  
never men-  
struated  
but in preg-  
nancy.

Explained.

Uterine he-  
morrhage  
an occa-  
sional ef-  
fect,  
often a  
conse-  
quence, of  
great de-  
bility.

\* Vol. iv. p. 70.

† Vol. iv. p. 60.

‡ Hagedorn, Cent. ii. Obs. 94.

§ Medicinisch-Chirurgische Aufätze. Berl. 1778.

Hopfergärtner, über menschliche Entwicklungen. p. 71. Sturtg. 1792.

|| Vol. iii. Paropsis noctifuga. p. 204.

¶ Vol. iii. Paraculis perversa. p. 204.

GEN. I.  
SPEC. II.  
6 P. ute-  
rina leucor-  
rhoica.  
Leucor-  
rhoea.  
Treatment.

add to the debility or predisponent cause: and we must content ourselves with the plan already recommended under atonic hemorrhage of the uterus in a prior class and volume \*. Where the discharge has been induced by external violence, or a sudden emotion of the mind, venesection will be the best remedy we can have recourse to, and afterwards thirty or five and thirty drops of laudanum in a saline draught with two or three grains of ipecacuan.

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### SPECIES III.

## PARACYESIS ABORTUS.

### Miscarriage. Abortion.

#### PREMATURE EXCLUSION OF A DEAD FETUS FROM THE UTERUS.

GEN. I.  
SPEC. III.

Miscar-  
riage, how  
distinguish-  
ed from  
abortion,  
and prema-  
ture labour.

WE have stated in the introductory remarks to the present order that the usual term of pregnancy is forty weeks, or nine calendar months. Within this period, however, the fetus may be morbidly expelled at any time. If the exclusion take place within six weeks after conception it is usually called MISCARRIAGE; if between six weeks and six months, ABORTION; if during any part of the last three months before the completion of the natural term, PREMATURE LABOUR. Among some writers, however, abortion and miscarriage are used synonymously and both are made to express an exclusion of the fetus at any time before the commencement of the seventh

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\* Vol. II. Class III. Ord. IV. pp. 704, 707.

month. At seven months the fetus will often live. It has been born alive, in a few rare instances, at four months \*; and has as rarely continued alive when born between five and six months †.

The process of gestation may be checked, however, from its earliest period: for many of the causes of abortion, which can operate afterwards, may operate throughout the entire term, and hence a miscarriage occurs not unfrequently within three weeks after impregnation, or before the ovum has descended into the uterus. In this case the pains very much resemble those of difficult menstruation; and with a considerable discharge of clotted or coagulated blood the tunica decidua passes away alone, having also some resemblance to that imperfect form of it which we have already noticed as being produced in some cases of difficult menstruation, but exhibiting a more completely membranous structure. And here the ovulum escapes unperceived at some subsequent period, and is probably decomposed and incapable of being traced.

In subsequent periods of pregnancy abortion consists of two parts or stages, the separation of the ovum from the fundus of the womb, and its expulsion from the mouth. Sometimes these take place very nearly simultaneously, but sometimes several days or even weeks intervene; so that the process of abortion may considerably vary in its duration, and become exceedingly tedious. In several cases I have known the ovum remain undischarged for upwards of six weeks, and, in one case, for three months after its separation, and consequently after the death of the fetus, comparing its size and appearance with the ascertained term of gestation.

Through the whole of this period there is an occasional discharge from the vagina, and often temporary disquietudes, and even contractile pains in the uterus. But both are of a very different kind from those

GEN. I.  
SPEC. III.  
Paracyesis  
Abortus.  
Miscarriage.  
Abortion.  
Fetus may live at seven months.  
Has been born alive at four: and continued alive between five and six months.  
Miscarriage may occur at any period.  
Sometimes at three weeks.  
Symptoms at that period.  
Abortion in subsequent periods consists of two stages, separation and exclusion.  
These may be simultaneous or remote.  
When remote a discharge from the vagina during the interval: and occasional disquietude and pains: but different from those that precede separation.

\* A. Reyes, Campus Elys. Quæst. 90. p. 1164.

† Brouzet, sur l'Education medicinale des Enfants. 1. p. 37.



GEN. I.  
SPEC. III.  
Paracyesis  
Abortus.  
Miscar-  
riage.  
Abortion.  
Other  
distinctive  
symptoms.

which occur antecedently to the separation of the ovum. The first pains are usually sharp and expulsive, with a free discharge of clotting arterial blood; sometimes, indeed, in an alarming, though rarely a dangerous profusion; in the last they are dull and heavy, and the discharge is smaller in quantity, dark and fetid. We may also judge of the detachment of the ovum, and consequently the death of the fetus, by the cessation of those sympathetic symptoms which have hitherto connected the stomach and the mammæ with the action of the uterus, as the morning sickness, and the increasing plumpness of the breasts, which, not unfrequently, are so stimulated as to secrete already a small quantity of milk. On the separation of the ovum from the fundus of the uterus all these disappear; the stomach may be dyspeptic, but without the usual sickness, and the breasts become more than ordinarily flaccid.

Descent of  
the ovum:

The ovum, when at length discharged, comes away very differently in different cases. Sometimes the whole ovum is expelled at once; but more generally it is discharged in detached parts, the fetus first escaping with the liquor amnii, or descending with its own proportion of the placenta, the maternal proportion following some hours, or even days, afterwards. And, where there are twins, one of the fetuses, naked or surrounded with its membranes, is usually expelled alone, and the other not till an interval of several hours, or even a day or two; the discharge of blood ceasing, and the patient appearing to be in a state of recovery: so that it is difficult to determine whether or not there are twins in cases of early abortion.

in case of  
twins.

Causes of  
abortion of  
various  
kinds.

The causes of abortion are very numerous; and some of them are rather to be conjectured, than fully ascertained. They may depend upon the ovum itself, upon the uterus itself, or upon the uterus as affected by the nature of the maternal constitution, or accidental lesions.

Causes de-  
pendent  
upon the  
ovum.

“The imperfections observable in ova,” remarks Dr. Denman, “are of different kinds, and found occasion-

ally in every part; and there is usually a consent between the fetus and the shell of the ovum, as the placental part and membranes may be called, but not always. For examples have occurred in which the fetus has died before the termination of the third month, yet the shell, being healthy, has increased to a certain size, has remained till the expiration of the ninth month and then been expelled, according to the genius and constitution of the uterus, though frequently it has been found to have undergone great changes, as, for instance, in many cases of hydatids \*."

"It is remarkable," says the same author, "that women who are in the habit of miscarrying, go on in a very promising way to a certain time, and then miscarry, not once, but for a number of times, in spite of all the methods that can be contrived, and all the methods that can be given: so that, besides the force of habit, there is sometimes reason to suspect that the uterus is incapable of distending beyond such size, before it assumes its disposition to act, and that it cannot be quieted till it has excluded the ovum. What I am about to say, will not, I hope, be construed as giving a licence to irregularity of conduct, which may often be justly assigned as the immediate cause of abortion, or lead to the negligent use of those means that are likely to prevent it. But from the examination of many ova after their expulsion, it has appeared that their longer retention could not have produced any advantage, the fetus being decayed, or having ceased to grow long before it was expelled. Or the ovum has been in such a state as to become wholly unfit for the purpose it was assigned to answer: so that if we could believe there was a distinct intelligence existing in every part of the body, we should say it was concluded in council that this ovum can never come to perfection and shall be expelled †."

GEN. I.  
SPEC. III.  
Paracyesis  
Abortus.  
Miscar-  
riage.  
Abortion.

Causes de-  
pendent  
upon the  
nature of  
the uterus.

\* Practice of Midwifery, Edit. 5. p. 508. 8vo.

† Denman, ubi suprà. p. 508.

GEN. I.  
SPEC. III.  
Paracyesis  
Abortus.  
Miscar-  
riage.  
Abortion.  
Causes con-  
stitutional  
or inciden-  
tal.

Miscar-  
riage apt  
to recur.  
Has recur-  
red up-  
wards of  
twenty  
times.

Cause from  
plethora  
whether  
entonic or  
atonic.

The causes of abortion of a constitutional or accidental kind are more obvious. They may be internal and depend upon a relaxed or debilitated state of the system generally, and consequently of the uterus as a part of it; or external, and depend on adventitious circumstances. Violent pressure, as that of tight stays, by preventing the uterus from duly enlarging, is an obvious cause, as is also that of a sudden shock by a fall, or a blow on the abdomen: violent exertion of every kind is a cause not less obvious, as that of immoderate exercise in dancing, riding, or even walking; lifting heavy weights; great straining to evacuate the feces, or too frequent evacuations from a powerful purgative. Violent excitement of the passions, as of terror, anxiety, sorrow or joy. Violent excitement of the external senses by objects of disgust—whether of sight, sound, taste, or even smell; or whatever else tends to disturb or check the circulation suddenly, and hereby to produce fainting, will often prove a cause of abortion. And when once this affection has been produced, the organs with difficulty recover their elasticity, and it is extremely apt to recur upon the slightest causes. Plater gives us an account of fourteen miscarriages in succession\*; Werlhoff, of five within two years†; and Werloschnig, of not less than eight in a single year‡. Wolfius relates the history of a woman, who, in the whole course of her life, suffered twenty-two distinct abortions§: and Schultz, that of another, who, in spite of every remedy, miscarried twenty three times, and uniformly in the third month, probably from an indisposition in the uterus to become distended further, as suggested in similar cases by Dr. Denman in the passage just quoted from him.

Another, and a very frequent cause, is plethora, and this, whether it be from entony or atony. “The ute-

\* Observationes, Lib. II. p. 467.

† Opp. III. p. 718.

‡ De Curationibus Verno-autumn, p. 496.

§ Lection. Memorab. p. 418.

rus," observes Mr. Burns, "being a large vascular organ, is obedient to the laws of vascular action, whilst the ovum is more influenced by those regulating new formed parts; with this difference, however, that new formed parts or tumours are united firmly to the part from which they grow by all kinds of vessels, and generally by fibrous or cellular substance, whilst the ovum is connected to the uterus only by very tender and fragile arteries and veins. If, therefore, more blood be sent to the maternal part of the ovum than it can easily receive, and circulate and act under, a rupture of the vessels will take place, and an extravasation and consequent separation be produced: or even where no rupture is occasioned, the action of the ovum may be so oppressed and disordered as to unfit it for continuing the process of gestation \*."

Now in atonic plethora, or that commonly existing in high and fashionable life, among those who use little exercise, live luxuriously, and sleep in soft warm beds, although the action that accompanies the pressure is feeble compared with what occurs in the opposite state, the vessels themselves are feeble also, and their mouths and tunics are exceedingly apt to give way to even a slight impetus: and hence plethora becomes a frequent cause of abortion in women of a delicate habit and unrestrained indulgence.

Among the robust and the vigorous, however, its mode of operation is still more obvious and direct. An increased flow of blood is here forced urgently on the uterus, which participates irresistibly in the vehemence of the action; so that if the vessels do not suddenly give way, and hemorrhage instantly occur, the patient feels a tensive weight in the region of the uterus, and shooting pains about the pelvis. "This cause," observes Mr. Burns, "is especially apt to operate in those who are newly married, and who are of a salacious disposition,

GEN. I.  
SPEC. III.  
Paracymesis  
Abortus.  
Miscarriage.  
Abortion.  
How entonicplethora acts.

How atonic plethora acts.

Mode of action most obvious in entonic plethora.

\* Principles of Midwifery, 3d Edit. 8vo, p. 191.



GEN. I.  
SPEC. III.  
Paracyesis  
Abortus.  
Miscar-  
riage.  
Abortion.

as the action of the uterus is thus much increased, and the existence of plethora rendered doubly dangerous. In these cases, whenever the menses have become obstructed, all causes tending to increase the circulation must be avoided, and often a temporary separation from the husband is indispensable \*."

Treatment  
of abortion  
embraces  
two inten-  
tions: that  
of preven-  
tion and of  
subsequent  
manage-  
ment.

The general treatment of abortion consists of two intentions, that of preventing it when it threatens; and that of safely leading the patient through it when there is little doubt that it has taken place.

Preventive  
process.

The chief symptoms menacing abortion are transitory pains in the back or hypogastric region, or a sudden hemorrhage from the vagina. In all these cases the first step to be taken is a recumbent position, and when the patient is once placed in this state we should deliberately examine into the nature of the cause. If there be symptoms of plethora, or oppression, if an accident, or a sudden emotion of the mind, or severe exercise, as of dancing, riding, or even walking, have produced them by disturbing the equilibrium of the circulating system, blood should be immediately taken from the arm, and all irritation removed from the bowels by a gentle laxative or injection. In plethora, indeed, we may go beyond this, and empty the bowels more freely; yet even here our object should be to reduce without weakening. In every instance, except where plethora prevails, after abstracting blood, the next best remedy is a full dose of opium consisting of thirty or forty drops of laudanum, or more if the symptoms be urgent, and repeated every three or four hours till the object is obtained †. And where the system is so feeble or emaciated that bleeding is counter-indicated, we must content ourselves with giving sulphuric acid with small doses of digitalis, unless, indeed, there be much tendency to sinking at the stomach, and, in this case, we must limit our practise to the mineral acid and opium, and gently relieving the bowels.

\* Burns, ut supra, p. 192.

† Aaskow, Act. Soc. Med. Hafn. Tom. I.

By this plan the pains originating from incidental causes are often checked, and the partial separation of the ovum that has commenced is put a stop to. But the remedial process is thus far merely begun: the patient, for some weeks, must be peculiarly attentive to her diet, which should be light and sparing, and if exercise of any kind be allowed, it should be that of swinging, or of an easy carriage. Cold bathing, and especially cold sea-bathing, is of great importance; and where these cannot conveniently be had, a cold hip or shower-bath may be employed in their stead; and if there should still be the slightest issue of blood from the vagina, injections of cold water, or of a solution of alum, or sulphate of zinc, should be thrown up the passage two or three times a day: or an icicle or a snow-ball be employed as a pessary.

If the habit be peculiarly vigorous and robust, stimulants and softness of bed-clothes must be carefully avoided, and the downy couch be exchanged for a hard mattress. But if the constitution be delicate and emaciated, two or three glasses of wine may be allowed daily, and a course of angustura, columbo, or some other bitter tonic should be entered upon. In either case, however, it is absolutely necessary that sexual connexion should be abstained from for ten days or a fortnight.

It has of late been very much the custom to confine women of a very delicate frame, and especially after they have once miscarried, to a recumbent position from the first symptom of conception through the whole term of gestation. In a few cases this may be a right and advantageous practice, but in the present day it is employed far too indiscriminately. Among the causes of abortion we have just enumerated there are many it can never touch, as where the ovum itself is at fault, or there is a natural indisposition in the uterus to expand beyond a certain diameter. In this last case, if we could be sure of it, a tepid hip-bath employed every evening about the time the abortion is expected would be a far more likely means of preventing it: for we should act here as in all other affections where our ob-

GEN. I.  
SPEC. III.  
Paracyesis  
Abortus.  
Miscarriage.  
Abortion.  
Treatment.  
Same process must be long continued even after its success.  
Cold applications locally, with astrigent injections.

Warm bedding to be exchanged for a hard mattress.

A little wine allowed to the weakly.  
Sexual connexion to be abstained from.

Uninterrupted use of a recumbent posture recommended by some.

The question examined.

Useful in some cases, but inapplicable to others:

in which a tepid hip-bath is more likely to be useful.

Illustrated.

GEN. I.  
SPEC. III.  
Paracyesis  
Abortus.  
Miscar-  
riage.  
Abortion.  
Treatment.

ject is to relax and take off tension, in which states we uniformly employ warmth and moisture, commonly, indeed, a bread and water poultice. And hence, in the instance before us, one of the best applications we could have recourse to would be a broad swathe of flannel moistened with warm water and applied round the loins and lower belly every night on going to bed, surrounded externally with a dry swathe of folded linen. This should be worn through the whole night, and continued for a fortnight about the time we have reason to expect a periodical return of abortion from the cause now alluded to.

Further  
illustration  
from a case  
in which it  
appeared  
to hasten  
miscar-  
riage.

I was lately requested to join in consultation with an obstetric physician upon the state of a young married lady of a highly nervous and irritable frame united with great energy and activity both of mind and body, who had hitherto miscarried about the third month of gestation, by braving all risks, taking walks of many miles at a stretch, or riding on horseback for half the day at a time. She was now once more in the family way, and had just commenced the discipline of only quitting her bed for the sofa to which she was carried, and on which she was ordered to repose with her head quite flat and in a line with her body, and without moving her arms otherwise than to feed herself: and to continue in this motionless state for the ensuing eight months. Without entering into the immediate cause of her former miscarriages, I ventured to express my doubts whether so sudden and extreme a change would not rather hurry on than prevent abortion, by accumulating such a degree of sensorial power as should produce an insupportable dysphoria or restlessness, which would peculiarly vent itself on the organ of greatest irritation. But I recommended that all exertion of body and mind should be moderated, that the diet should be plain, the hours regular, that the position should be generally recumbent, and strictly so for a fortnight about the time in which abortion might be expected. It was overruled, however, to persevere in the

plan already adopted from the moment, and every secondary relief and amusement that could be devised was put in requisition to support the patient's spirits. She went on well for a week, but at the end of this period became irritable, fatigued, and dispirited; and miscarried at about six weeks from conception, instead of advancing to three months as she had hitherto done.

Even in the case of a delicate and relaxed frame, and of a mind that has no objection to confinement, it is well worth consideration whether the ordinary means of augmenting the general strength and elasticity by such tonics as are found best to agree with the system, and such exercises as may be taken without fatigue; particularly any of those kinds of motion which the Greeks denominated *æora*, as swinging or sailing, riding in a palanquin, or in a carriage with a sofa-bed or hammock, which, as we observed on a former occasion\*, instead of exhausting, tranquillize and prove sedative, retard the pulse, produce sleep, and calm the irregularities of every irritable organ,—may not be far more likely to carry the patient forward than a life of unchanging indolence, and undisturbed rest, which cannot fail to add to the general weakness, how much soever the posture it inculcates may favour the quiet of the uterus itself.

We have thus far supposed that there is a mere danger of abortion, and that the symptoms are capable of being suppressed. But if the pains, instead of being local and irregular, should have become regular and contractile before medical assistance is sought for, or should have extended round the body, and been accompanied with strong expulsive efforts, and particularly if, in conjunction with those, there should have been a considerable degree of hemorrhage, our preventive plan will be in vain, a separation has unquestionably taken place, and to check the descent of the detached ovum would be useless if not mischievous. Even though the pains should

GEN. I.  
SPEC. III.  
Paracyesis  
Abortus.  
Miscarriage.  
Abortion.  
Treatment.

Other arguments worth considering.

Management of abortion where it occurs.

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\* Marasmus Phthisis, Vol. II. p. 780.



GEN. I.  
SPEC. III.  
Paracyesis  
Abortus.  
Miscar-  
riage.  
Abortion.  
Treatment.  
When the  
the dis-  
charge  
small it  
should be  
left to it-  
self.  
Treatment  
in flooding.

have ceased we can give no encouragement, for such a cessation only affords a stronger proof that the effect is concluded.

If the discharge continue but in small quantity, it is best to let it take its course; to confine the patient to a bed lightly covered with clothing, and give her five and twenty or thirty drops of laudanum. Bleeding is often had recourse to with a view of effecting a revulsion: it is uncalled for, however, and may do mischief by augmenting the weakness.

But the practitioner often arrives when the discharge is in great abundance and amounts to a flooding; and the patient is faint and sinking, and appears ready to expire.

Symptoms  
alarming  
but not  
often fatal.

To the inexperienced these symptoms are truly alarming, and, in a few instances, sudden death appears to have ensued from the exhaustion that accompanies them.

Syncope it-  
self of use.

But these are very uncommon cases, for it rarely happens that the patient does not recover in an hour or two from the deliquium: and even the syncope itself is one of the most effectual means of putting a check to the discharge by the sudden interruption it gives to all vascular action.

Cold exter-  
nal and in-  
ternal.

Cold, both external and internal, is here of the utmost importance; the bed-curtains should be undrawn, the windows thrown open, and a sheet alone flung over the patient; while linen wrung out in cold water, or ice-water should be applied to the lower parts of the body and renewed as its temperature becomes warm: holding the application, however, as soon as the hemorrhage ceases.

Injections  
when to be  
desisted  
from and  
why.

Injections should, in this case, be desisted from; for the formation of clots of blood around the bleeding vessels should be encouraged as much as possible, instead of being washed away. And for this reason it is now a common practice to plug the vagina as tight as possible with sponge or folds of linen, or what is better, a silk handkerchief, smeared over with oil that they may be introduced the more easily, and afterwards to confine the plug with a T bandage. This plan has been long re-

The vagina  
to be  
plugged.

commended by Dr. Hamilton, and has been extensively followed with considerable success. Here, also, Dr. Hamilton prescribes large doses of opium as an auxiliary, beginning with five grains, and continuing it in doses of three grains every three hours, till the hemorrhage has entirely ceased. Opium, however, is given with most advantage where the flooding takes place after the expulsion of the ovum; for if this have not occurred its advantage may be questioned, since it has a direct tendency to interrupt that muscular contraction without which the ovum cannot be expelled. And it should be farther observed that where opium is had recourse to in such large doses as are above produced, it must not be dropped suddenly, for the most mischievous consequences would ensue; but must be continued in doses gradually diminishing till it can at length be omitted with prudence.

If the flooding occur after the sixth or seventh month, and the debility be extreme, the hand should be introduced into the uterus as soon as its mouth is sufficiently dilated, and the child turned and brought away. And if, before this time, a considerable degree of irritation be kept up in the womb from a retention of the fetus or any considerable part of the ovum after its separation, one or two fingers should also be introduced for the purpose of hooking hold of what remains, and bringing it away at once. Such a retention is often exceedingly distressing, the dead parts continuing to drop away in membranous or filmy patches for several weeks intermixed with a bloody and offensive mucus. And not unfrequently some danger of a typhous fever is incurred from the corrupt state of the unexpelled mass. In this case, the strength must be supported with a nutritious diet, a liberal allowance of wine, and the use of the warm bitters, with mineral acids. It is also of great importance that the uterus itself be well and frequently washed with stimulant and antiseptic injections, as a solution of alum or sulphate of zinc, a decoction of cinchona or pomegranate bark, a solution of myrrh or benzoin, or,

GEN. I.  
SPEC. III.  
Paracyesis  
Abortus.  
Miscarriage.  
Abortion.  
Treatment.  
Opium in large doses: when given most advantageously:

only to be dropped by degrees.

The child under what circumstances to be turned and brought away.

Distress from a retention of the fetus when dead.

The strength to be here supported. Uterus to be washed with stimulant and antiseptic injections.

GEN. I.  
SPEC. III.  
Paracyesis.  
Abortus.  
Miscar-  
riage.  
Abortion.

Summary  
of treat-  
ment.

what is better than any of them, negus made with rough port wine. The injection must not be wasted in the vagina, but pass directly into the uterus; and, on this account, the syringe must be armed with a pipe made for the purpose and of sufficient length.

The application of cold then, plugging the vagina, opium, and perfect quiet, and, where the pulse is full, venesection, are the chief remedies to be employed in abortions, or threatenings of abortion, accompanied with profuse hemorrhage; and where these do not succeed, and especially after the sixth month, immediate delivery should be resorted to. The process, however, of applying cold should not be continued longer than the hemorrhage demands; for cold itself, when in extreme, is one of the most powerful sources of sensorial exhaustion we are acquainted with. And hence, where the system is constitutionally weak, and particularly where it has been weakened by recurrence of the same discharge it may be a question well worth weighing whether any thing below a moderately cool temperature be allowable even on the first attack? as also whether the application of warm cloths to the stomach and extremities might not be of more advantage? for unless the extremities of the ruptured vessels possess some degree of power they cannot possibly contract, and the flow of blood must continue. And it is in these cases that benefit has sometimes been found by a still wider departure from the ordinary rules of practice, and the allowance of a little cold negus. So that the utmost degree of judgement is necessary on this occasion, not only how far to carry the established plan, but on peculiar emergencies how far to deviate from, and even oppose it.

Hemor-  
rhages from  
abortion  
increase in  
danger as  
they in-  
crease in  
recurrence.  
Evil effects  
of frequent  
abortions.

We have said that the hemorrhage which takes place in abortions, however profuse, is rarely accompanied with serious effects. This, however, must be limited to the first time of their taking place: for if they recur frequently in the course of a single gestation, or form a habit of recurrence in subsequent pregnancies, the blood, from such frequent discharges, loses its proper crasis;

the strength of the constitution is broken down; the sensorial fluid is secreted in less abundance, perhaps in less energy; and all the functions of the system are of consequence performed with a considerable degree of languor. The increasing sensorial weakness produces increasing irritability: and hence slighter external impressions occasion severer mischief and the patient becomes subject to frequent fits of hysteria, and other spasmodic affections. Nor is this all: for the stomach cannot digest its food, the intestines are sluggish, the bile is irregularly secreted, the heart acts feebly; and the whole of this miserable train of symptoms is apt to terminate in dropsy.

GEN. I.  
SPEC. III.  
Paracysis  
Abortus.  
Miscar-  
riage.  
Abortion.  
Treatment.



## GENUS II.

## PARODYNIA.

**Morbid Labour.**

THE PROGRESS OF LABOUR DISTURBED OR ENDANGERED  
BY IRREGULARITY OF SYMPTOMS, PRESENTATION OR  
STRUCTURE.

GEN. II.  
Regularity  
with which  
utero-ges-  
tation com-  
pletes itself  
and termi-  
nates.

Supposed  
causes of  
labour  
pains on  
the com-  
pletion of  
pregnancy.

THE generic term is a Greek compound from *παρὰ*, malè, and *ᾠδὴν* or *ᾠδῆς*, *ivos*, “dolor parturientis.” All the different species of viviparous animals have a term of utero-gestation peculiar to themselves, and to which they adhere with a wonderful precision. Among women we have already said that this term is forty weeks, being nine calendar or ten lunar months. Occasionally the expulsory process commences a little within this period, and occasionally extends a little beyond it: but, upon the whole, it is so true to this exact time as clearly to show it to be under the influence of some particular agency, though the nature of such agency has never been satisfactorily pointed out. Sometimes the weight of the child has been supposed to force it downwards at this precise period, and sometimes the uterus has been supposed to contract, from its inability of expanding any farther, and hence from an irritable excitement produced by the pressure of the growing fetus. By other physiologists it has been ascribed to the increasing activity of the child, and the uneasiness occasioned by its movements. But it is a sufficient answer to all these hypotheses to remark that a like punctuality is observed whether the child be small or large, alive or dead; unless, indeed, the death took place at a premature period of the pregnancy: for “No fact,” says Dr. Denman, “is more in-

contestably proved than that a dead child, even though it may have become putrid, is commonly born after a labour as regular and natural in every part of the process as a living one\*:" and hence we can only resolve it into the ordinary law of instinct or of nature, like that which regulates the term of menstruation, or assert still more intelligibly with Avicenna that, "at the appointed time labour comes on by the command of God."

In natural labour, which consists in a gradual enlargement of the mouth of the womb, and the diameter of the vagina, so as to suffer the child to pass away when urged from above by a repetition of expulsatory contractions of the uterus and all the surrounding muscles, there is little or no danger, however painful or distressing to the mother. These contractions, or labour-pains, continue with a greater or less regularity of interval and recurrence from two hours to twelve, the process rarely terminating sooner than the former period, or later than the latter: the ordinary term being about six hours.

But unhappily labours do not always proceed in a natural course; for sometimes there is a feebleness or irregularity in the muscular action that greatly retards their progress; or a derangement of some remote organ that sympathizes with the actual state of the uterus, and produces the same effect; or the mouth of the uterus itself is peculiarly rigid and unyielding; or the natural presentation of the child's head may be exchanged for some other position; or the maternal pelvis may be misshapen, and not afford convenient room for the descent of the child; or there may be a plurality of children; or even after the birth of the child the placenta may not follow with its ordinary regularity, or an alarming hemorrhage may supersede: each of which conditions becomes a distinct species of disease in the progress of morbid labour, and the whole of which may be arranged as follow:

GEN. II.  
Parodynia.  
Morbid  
labour.

All inapplicable or unsatisfactory: and hence best resolved into the ordinary law of instinct, or the appointment of Providence by a general law.

Little or no danger in natural labour. Ordinary term of labour from two hours to twelve.

Causes of morbid labour.

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\* Pract. of Midwifery, 8vo. Edit. 5. p. 255.

GEN. II. Parodynia. Morbid labour.	1.	PARODYNIA ATONICA.	ATONIC LABOUR.
	2.	————— IMPLASTICA.	UNPLIANT LABOUR.
	3.	————— SYMPATHE-	COMPLICATED LABOUR.
		TICA.	
	4.	————— PERVERSA.	PRETERNATURAL PRESEN-
			TATION. CROSS-BIRTH.
	5.	————— AMORPHICA.	IMPRACTICABLE LABOUR.
	6.	————— PLURALIS.	MULTIPLICATE LABOUR.
	7.	————— SECUNDARIA.	SEQUENTIAL LABOUR.

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### SPECIES I.

## PARODYNIA ATONICA.

### Atonic Labour.

LABOUR PROTRACTED BY GENERAL OR LOCAL DEBILITY,  
OR HEBETUDE OF ACTION.

GEN. II.  
SPEC. I.  
Pathologi-  
cal re-  
marks.

It often happens in various affections of the system that a general law is incapable of being carried into effect with promptness and punctuality from weakness or indolence of the organs that are chiefly concerned in its execution. Thus, when vaccine or variolous fluid is properly inserted under the cuticle, it remains there in many cases for several days beyond its proper period, in a dormant state from inirritability or indolence in the cutaneous absorbents: and, in the case of small-pox, even where the fluid has been received into the system, whether naturally or by inoculation, and has excited febrile action, this action is, in many instances, very considerably augmented from a like indolence or irritability of the secernents of the skin which do not throw off the morbid matter sufficiently on the surface.

A like want of harmonious action very frequently occurs in parturition. The full time has expired—the uterus feels uneasy, and the uneasiness is communicated to the adjoining organs, and there are occasional pains in the back or in the lower belly, but either from a weakness, or hebetude, or both, in the uterus itself, or in the muscles that are to co-operate with it in expelling the child, the pains are not effective and the labour makes little progress.

GEN. II.  
SPEC. I.  
Parodynia  
atonica.  
Atonic  
labour.

Applied to  
atonic  
labour.  
Labour  
rendered  
lingering  
from in-  
effective  
pains.

From a  
cessation of  
pains pro-  
duced by a  
cessation of  
strength.

Such ex-  
haustion  
shows itself  
at different  
stages of  
the labour.

It often happens, also, in debilitated habits that while in some part of its progress the labour advances kindly and even rapidly, the little strength the patient possesses is worn out, and her pains suddenly cease; or, what is worse, still continue, but without their expulsive or effective power, and, consequently, do nothing more than tease her, and add to the weakness. This exhaustion will sometimes occur soon after the commencement of the labour, or in its first stage, before the os uteri has dilated and while the water is slowly accumulating over it; but in this stage it is more likely to occur if the membranes should have prematurely given way, and the water have been already evacuated. Yet it occurs also, occasionally, towards the close even of the last stage, and when the head of the child has completely cleared itself of the uterus, and is so broadly resting on the perinæum that a single effective pain or two would be sufficient to send it without any assistance into the world.

Treatment  
to be pur-  
sued.  
Soothing  
and consol-  
ing assur-  
ances.  
Stimulant  
injections.

In the greater number of these cases, to wait with a quiet command of mind, and soothe the patient's desponding spirits by a thousand little insinuating attentions, and a confident assurance that she will do well at last, is the best if not the only duty to be performed. A stimulant injection, however, of dissolved soap or muriate of soda will often re-excite the contractions where they flag, or change the nature of the pains where they are ineffective. After this it is often useful to give thirty or five and thirty drops of laudanum, and to let the patient remain perfectly quiet. It is not certain in what way the laudanum may act, for it sometimes proves a local stimu-

Laudanum.



GEN. II.  
SPEC. I.  
Parodynia  
atonica.  
Atonic  
labour.

lant, and sometimes a general sedative, but in either way it will be serviceable and nearly equally so; for it will either shorten the labour by re-exciting and invigorating the pains, or increase the general strength by producing sleep and quiet.

Cordials to  
be allowed  
in modera-  
tion.

If the pulse should be quick and feeble with languor and a sense of faintness at the stomach, a little mulled wine or some other cordial may be allowed. If the mouth of the womb be lax and dilatable, and the water have accumulated largely and protrude upon it as in a bag, advantage is often gained by breaking the membranes and evacuating the fluid, for a new action is hereby given to the uterus, and while it contracts with more force it meets with less resistance, and its mouth is more rapidly expanded. But unless the labour should have advanced to this stage, the membranes should never be interfered with; for their plasticity, and the gradual increase and pressure of their protruding sac against the edges of the os uteri, form the easiest and surest means of enlarging it, whilst the retention of the fluid in this early stage of parturition lubricates the inner surface of the womb, and tends to keep off heat and irritation.

When pru-  
dent to  
break the  
waters.

Injurious to  
attempt to  
dilate  
mouth of  
the uterus  
unless when  
narrow and  
rigid.  
When the  
fingers may  
be applied  
with ad-  
vantage.

For the same reason, if the mouth of the womb be narrow and have hitherto scarcely given way, the application of the finger can be of no advantage. Every attempt to dilate it must be in vain, and only produce irritation, and an increased thickening in its edges: but if it have opened to a diameter of two inches, and be at the same time soft and expansile, advantage should be taken of the pains to dilate it by the introduction of one or two fingers still further, which should only, however, co-operate with the pains, and be employed while they are acting; and by these conjoint means the head of the child sometimes passes rapidly and completely out of the uterus into the vagina, or outer mouth as it is called on these occasions.

When the  
head has  
passed into  
and lodges  
in the  
vagina, if

We have said that it is sometimes apt to lodge here in consequence of the patient's exhaustion, and an utter cessation of all pains, or of all that are of any avail. She

should again therefore be suffered to rest, and, if faint, be again recruited with some cordial support. Generally speaking, time alone is here wanting, and the practitioner must consent to wait: and it will be better for him to retire from his patient and to wait at a little distance. But if several hours should pass away without any return of expulsoy efforts, if there should be frequent or continual pains without any benefit, if the patient's strength should sink, her pulse become weak and frequent, if the mind should show unsteadiness, and there be a tendency to syncope, and if, at the same time, the head be lying clear on the perinæum, the vectis or forceps should be had recourse to, and the woman be delivered by artificial means. This situation forms a general warrant: but for the peculiar circumstances in which such or any other instruments should be employed, the manner of employing them and the nature of the instruments themselves, the reader must consult such books as are expressly written upon the subject, and should sedulously attend the lectures and the introductory practice which are so usefully offered to him in this metropolis.

GEN. II.  
SPEC. I.  
Parodynia  
atonica.  
Atonic  
labour.  
the pains  
cease, no  
attempt  
should at  
first be  
made to re-  
excite  
them.  
When  
assistance is  
necessary:  
even with  
the vectis  
or forceps.

## SPECIES II.

### PARODYNIA IMPLASTICA.

#### Compliant Labour.

LABOUR DELAYED OR INJURED FROM IMPLASTICITY OR  
UNKINDLY DILATATION OF THE SOFT PARTS.

THE tediousness and difficulty of the preceding species of labour proceed chiefly from atony or hebetude of the

GEN. II.  
SPEC. II.  
How chiefly  
distinguish-  
ed from the  
preceding  
species.

GEN. II.  
SPEC. II.  
Parodynia  
implastica.  
Unpliant  
labour.

system generally, or of the instrumental organs particularly. But it often happens that the parts dilate and the labour proceeds as slowly from an implasticity, or rigid resistance to the expansion and expulsive efforts which should take place, according to the law of nature, at the fulness of time which we are now supposing to be accomplished, and which is sometimes productive of other evils than that of protracted suffering, offering us indeed the four following varieties :—

- |                 |   |
|-----------------|---|
| α Rigiditatis.  | The delay confined to a simple rigidity of the uterus or outer mouth. |
| ε Prolapsa.     | Accompanied with prolapse.  |
| γ Hæmorrhagica. | Accompanied with hemorrhage.  |
| δ Lacerans.     | Accompanied with laceration of the uterus or perinæum.                |

α P. im-  
plastica ri-  
giditatis.  
Parturient  
rigidity.  
Symptoms  
when the  
rigidity pro-  
ceeds from  
the general  
organ of the  
uterus.

RIGIDITY OF THE UTERUS may extend to the entire organ, or be limited to the cervix, or os uteri as it is called after the cervix has lost its natural form, and partakes of the sphæroidal shape of the fundus. Where the former occurs the practitioner meets with severe pains in the loins, shooting round to the lower belly and producing great contractile efforts of the muscles surrounding the uterus, so as to throw the patient from the violence of her exertions into a profuse perspiration, and induce the attendants to believe that the labour is advancing with great speed, while the practitioner himself finds, on examination, that there is no progress whatever; that the uterus itself does not unite in the expulsive force, the fluid of the amnios does not accumulate over the os uteri, nor the head of the child bear down upon it.

Symptoms  
when the  
rigidity is  
chiefly  
seated in  
the os uteri.

In other cases, he finds that the general organ of the uterus does participate in the common action, and force the head of the child downward, but that the mouth of the womb does not dilate or become thinner in consequence hereof; appearing on the contrary, in some cases, from a peculiar tenderness and irritation, to grow thicker and tenser, and more intractable.

And he not unfrequently finds even where both the body and mouth of the womb are sufficiently pliable and co-operative with the common intention, and the head of the child has become easily cleared of this organ, that a like rigidity and implasticity exist in the os externum, and that the child having readily worked its way thus far, is fast locked from this circumstance, and cannot get any further.

In all cases of this kind the same means of relaxation should be resorted to as in an irritable or inflammatory tenseness and rigidity of other organs. Blood should be freely abstracted, active purgatives be given by the mouth, and copious emollient injections be administered without much aperient virtue, so that they may for some time remain in the rectum and act as a fomentation. And here also it may be advantageous to apply round the loins and lower belly, a broad swathe of flannel wrung out in hot water, and to encircle it with an equally broad band of folded linen, in the manner already recommended in PARAMENIA DIFFICILIS.

In several cases of rigidity, if no means be adopted to subdue the tension, the protrusive force of the surrounding muscles is sometimes so considerable that, as it cannot expel the child by itself, it goes far to expel the child and the uterus conjointly, the latter being thrust downward into the outward passage and its mouth projecting out of the vulva, thus constituting a PARTURIENT PROLAPSE.

While the uterus is thus forcibly descending, the attendant should support it, or the head of the child, with two fingers: if the prolapse be complete, the uterus should be returned into its proper place as quickly as possible; and if this cannot be done, the child must be turned, and delivery take place as speedily as may be.

In the violence of this struggle, it sometimes happens moreover, and particularly where the water has escaped, that some of the vessels give way, or the placenta is partly detached, and there is the additional evil of a PROFUSE HEMORRHAGE to contend with.

GEN. II.  
SPEC. II.  
α P. im-  
plastica ri-  
giditatis.  
Parturient  
rigidity.  
Symptoms  
when seated  
in the os  
externum.

Treatment.

β P. im-  
plastica  
prolapsa.  
Parturient  
prolapse.

Treatment.

γ P. im-  
plastica  
hæmorrhagica.  
Parturient  
hemor-  
rhage.



GEN. II.  
SPEC. II.  
γ P. im-  
plastica  
hæmorrha-  
gica.  
Parturient  
hemor-  
rhage.  
Treatment.

If this occur in the commencement of labour, venesection should generally be had recourse to, the patient be kept cool and quiet, and take thirty drops of laudanum. If the labour have advanced and is advancing rapidly, and the hemorrhage not be very considerable, we may safely trust to nature to complete the process before any serious mischief ensues. But if the patient be debilitated, or much exhausted, or the labour advance slowly, the woman should be delivered by turning the child, or having recourse to the forceps according to the progress of the labour, and the position of the child at the time.

δ P. im-  
plastica  
lacerans.  
Parturient  
laceration.

But there is a far worse evil than any of these, which results from the implasticity we are now considering: and that is a rupture or LACERATION either OF THE VAGINA OR OF THE UTERUS.

Causes of  
laceration:

mostly de-  
pendent on  
implasti-  
city:

sometimes  
from the  
sharp edge  
of the ilium.

The causes of laceration are said to be numerous, and it often occurs suddenly and without any known cause: but if we examine into their general nature, we shall find that except in the case of brutal force or want of skill, they are almost always dependent on a certain degree of implasticity in the part of the lacerated organ which prevents it from yielding with the uniformity of the other parts, or, from a peculiar degree of irritability that renders it more liable to irregular action or spasm: though there can be no question that in a very few instances the laceration has commenced from a cut produced by an occasional sharpness of the edge of the ilium. "Those women," observes Mr. Burns, "are most liable to rupture of the uterus who are very irritable, and subject to cramp; or who have the pelvis contracted, or its brim very sharp, or who have the os uteri very rigid, or any part of the womb indurated. Schulzius relates a case where it was produced by schirrhous of the fundus; and Friedius one where it was owing to a carneo-cartilaginous state of the os uteri \*."

Laceration  
of the fun-  
dus of the  
uterus may  
take place  
during any

Laceration of the fundus of the womb may take place during any part of the labour when the pains are violent,

\* Principles of Midwifry, 8vo. 3d. edit. p. 361.

and the walls of the organs do not act in unison in every part; but the mischief more commonly commences in the cervix, when the head, or the shoulders, or any other part, is passing through, and the whole of its circumference does not yield equally. Where the accident occurs in the vagina or perinæum, it must necessarily take place after the head has descended from the womb, and is pressing upon the substance of these organs that, like the lacerating os uteri, does not yield equally in every point.

In most cases of an implastic rigidity, whether in the body of the uterus itself, or in its cervix, or in the os externum, there is a considerable degree of local irritation, and, in very many of them, of firm and vigorous action. The parts are not only rigid, but dry, and hot, and tender, and the pulse is generally full with restlessness, and a heated skin. And hence venesection is imperatively called for from an early period of the labour; and there are few cases in which the uterus has not acted afterwards with more freedom, and its mouth been rendered laxer, softer, and more compliable. In all such cases also an emollient injection several times repeated, will considerably co-operate in taking off the tension, and increasing the expansibility. Here opium should be avoided, but general relaxants as antimony and ipecacuan, given in the neutral effervescing draught, may add to the general benefit. The operator must be abstinent till the parts have yielded and the tension and irritation subsided, for before this, every application of the fingers will only increase the morbid tendency.

The only case in which the use of opium is here to be justified, is where, from the violence of the contractile pains, a considerable and an alarming hemorrhage has ensued, and the state of the os uteri will not allow of the introduction of the hand for the purpose of turning and delivering immediately. In this instance, after venesection and a due administration of emollient and aperient injections, our last dependence must be upon a powerful opiate for the purpose of allaying the irritation and taking off the pains.

GEN. II.  
SPEC. II.  
P. im-  
plastica  
lacerans.  
Parturient  
laceration.  
part of  
labour  
under par-  
ticular cir-  
cumstances.  
Laceration  
of the cer-  
vix more  
common.  
Laceration  
of the  
vagina or  
perinæum.  
Mode of  
treatment.

Opium  
when  
allowable.

GEN. II.  
SPEC. II.  
δ P. im-  
plastica  
lacerans.  
Parturient  
laceration.  
If prolapse  
be threat-  
ened the  
uterus to be  
supported  
during  
pains;  
and the  
patient  
avoid  
bearing  
down.

If a pro-  
lapse a re-  
duction to  
be instantly  
attempted,  
or the child  
be turned  
and brought  
away.

Laceration  
often oc-  
curs sud-  
denly  
though  
sometimes  
preceded by  
cramps.

General  
description  
of sym-  
ptoms on  
a rupture  
of the  
womb.

Effects of  
laceration  
the same  
whether in  
the body or  
neck of the  
womb or  
the vagina.

And if the force of the expulsive power thrust down the uterus so as to give danger of producing a prolapse, the practitioner must support the organ during the recurrence of the pains, by introducing two fingers into the vagina for this purpose, and the patient must be kept in a recumbent position without moving from it; and must be instructed to avoid as much as possible every expulsive or bearing-down exertion, while the pain is upon her. If the uterus have actually protruded into the vagina, a reduction must be instantly attempted; and if this cannot be done, no time should be lost in passing the hand through the cervix, as soon as, without force, it can be sufficiently dilated for this purpose, and delivering the child by turning.

Laceration generally takes place suddenly, though, in irritable habits, cramps or other spasmodic affections are often previously complained of in different parts of the body. Mr. Burns has well described the symptoms that succeed: "When this accident does happen the woman feels something give way within her, and usually suffers at that time an increase of pain. The presentation disappears more or less speedily, unless the head have fully entered the pelvis, or the uterus contract spasmodically on part of the child, as happened in Bechling's patient\*. The pains go off as soon as the child passes through the rent into the abdomen: or if the presentation be fixed in the pelvis, they become irregular and gradually decline. The passage of the child into the abdominal cavity is attended with a sensation of strong motion of the belly, and is sometimes productive of convulsions†."

It is not necessary to make a distinction between the parts in which the laceration takes place: for whether it be in the fundus or cervix of the womb, or in the vagina, except where, as just observed, the position is fixed in the pelvis, the part presented instantly disappears, and the

\* Haller, Disput. Tom. III. p. 477,

† Burns, ut supra, p. 362,

child slips imperceptibly through the chasm into the hollow of the abdomen, sometimes with a hemorrhage that threatens life instantly, but sometimes with little or even no hemorrhage whatever.

This accident will not unfrequently occur towards the close of a labour that promises fair. It is not many years ago, when the present author, at that time engaged in this branch of the profession, was requested with all speed to attend, in consultation, upon a lady in Wigmore Street, who was then under the hands of a practitioner of considerable skill and eminence. She had for about eight hours been in labour of her first child, herself about thirty-eight years of age, had had natural pains, and been cheered throughout with the prospect of doing well, and even more rapidly than usual under the circumstances of the case. In fact the head had completely cleared the os uteri and was resting on the perinæum, and the obstetric practitioner was flattering himself that in a quarter of an hour at the farthest, he should be released from his confinement, when he was surprized by a sudden retreat of the child during a pain which he expected would have afforded her great relief, accompanied with an alarming flooding: and it was in this emergency the author of this work was requested to attend. On examination, it was ascertained that a large laceration had taken place in the uterus commencing at the cervix and apparently on the passing of the shoulders, but why any part of it should have torn at this time rather than antecedently there were no means of determining. It is usual, under these circumstances, to follow up the child with the hand through the rupture into the abdomen, and to endeavour to lay hold of the feet, and withdraw it by turning. The hemorrhage had alarmed the practitioner, and this had not been attempted; and at the time of the author's arrival, which was about an hour and a half afterwards, the attempt was too late, for the pulse was rapidly sinking, the breathing interrupted, and the countenance ghastly, yet the patient had not totally lost her self-possession, and being informed of her situation, begged earnestly to be let alone, and to be suffered to die in quiet.

GEN. II.  
SPEC. II.  
§ P. im-  
plastica  
lacerans.  
Parturient  
laceration.  
Sometimes  
occurs to-  
wards the  
close of a  
labour of  
good pro-  
mise.

Exem-  
plified.

Child in this  
case usu-  
ally fol-  
lowed up  
into the  
mother's  
body and  
brought  
away by  
the feet.



GEN. II.  
SPEC. II.  
§ P. im-  
plastica  
lacerans.  
Parturient  
laceration.  
Life con-  
tinues usu-  
ally about  
twenty-four  
hours after  
the acci-  
dent.  
Sometimes  
longer.  
Twenty-  
sixth day.  
Three  
months.  
A few rare  
accounts of  
a natural  
cure of  
the uterus,  
and a con-  
tinuance of  
the ex-fetus  
in the ab-  
domen for  
many years  
or through  
life.  
Where the  
child can-  
not be fol-  
lowed up  
the case  
must be left,  
or the  
Cesarean  
operation  
be per-  
formed.

Where there is little or no hemorrhage, the life usually continues much longer, whether the child be extracted or not; mostly about twenty-four hours; though in some cases considerably longer still. Dr. Garthshore attended a patient who lived till the twenty-sixth day, and the Copenhagen Transactions\* contain the case of a woman, who after being delivered, lingered for three months: and a few marvellous histories are given in the public collections, of a natural healing of the uterus while the child continued as a foreign and extra-fetal substance in the cavity of the abdomen for many years. Haller has reported a case in which it continued in this state for nine years†; and others relate examples of its remaining for sixteen‡, and even twenty-six years§, or through the entire term of the mother's natural life.

The only rational hope of saving both the mother and the child is by following up the latter through the rupture, and delivering it by the feet: but where this cannot be done from the smallness of the dilatation of the os uteri, or from a violent contraction of the uterus between the os uteri and the rent, we have nothing to propose but to leave the event to nature, or to extract the child by the Cesarean operation. We have just seen that in a few rare instances the vis medicatrix Naturæ, or instinctive tendency to health has succeeded in healing the wound and restoring the patient with the fetus still inhabiting the belly. But this result is so little to be expected that an incision into the cavity of the abdomen has not unfrequently been tried, and in some instances unquestionably with success ||.

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\* Tom. II. p. 326.

† Mem. de Paris. 1773.

‡ Eph. Nat. Cur. Dec. I. Ann. III. Obs. 12.

§ Id. Dec. II. Ann. VIII. Obs. 134.

|| Progrès de la Médecine, 1698. 12mo.

Abhandlung der Kögigl. Schwed. Acad. 1744.

Hist. de l'Acad. Royale des Sciences, 1714. p. 29. 1716. p. 32.

## SPECIES III.

## PARODYNIA SYMPATHETICA.

*Complicated Labour.*

LABOUR RETARDED OR HARASSED BY SYMPATHETIC DERANGEMENT OF SOME REMOTE ORGAN OR FUNCTION.

WE have often had occasion to observe that, with the exception of the stomach, there is no organ that holds such numerous ramifications of sympathy with other organs as the womb: and we hence find the progress of parturition disturbed, and what would otherwise be a natural, converted into a morbid labour by the interference of various other parts of the body or the faculties which appertain to them. The whole family of varieties which issue from this source are extremely numerous: but the three following are the chief:

- |                |  |
|----------------|--|
| α Pathematica. | Accompanied with terror or other mental emotion. |
| ε Syncopalis.  | Accompanied with fainting.                       |
| γ Convulsiva.  | Accompanied with convulsions.                    |

IN the PATHEMATIC VARIETY, the joint emotions which are usually operative upon a patient's mind, and especially on the first labour, are bashfulness on the presence of her medical attendant, and apprehension for her own safety. There is not a practitioner in the world but must have had numerous instances of a total suspension of pains on his first making his appearance in the chamber. And in some cases the pains have been completely driven away for four and twenty hours, or even a longer term.

There is nothing extraordinary in this, for two powerful morbid actions are seldom found to proceed in the animal frame simultaneously; and hence pregnancy is

GEN. II.  
SPEC. III.  
Extensive range of sympathy between the uterus and other organs: whence the present species of disease.

α P. sympathetic pathematica. Complicated with mental emotion, and hence retarded. Pains hereby sometimes entirely driven away. Explained.

GEN. II.  
SPEC. III.  
α P. sym-  
pathetica  
pathema-  
tica.  
Complicated with  
mental  
emotion.  
Duty of  
the attendant in relation to the  
above  
source of  
delay.

well known to put by phthisis, and the severest pain of a decayed tooth to yield to the dread of having it extracted, while the patient is on his way to the operator's house.

It is hence of great importance that the bespoken attendant should familiarise himself to his patient before his assistance is required, and endeavour to obtain her entire confidence: and it is better, when he is first ushered into her presence, in his professional capacity, that he should say little upon the subject of his visit, direct the conversation to some other topic of general interest, and then withdraw till he is wanted. And if the idea alone of his approach be peculiarly harassing, it is best for him to be in a remote part of the house in readiness, and not to see his patient, till her pains have taken so strong a hold as to be beyond the control of the fancy.

If her apprehensions, however, be very active, and if there be any particular ground for them it is most reasonable to enter candidly on the question, and to afford her all the consolation that can be administered.

ς P. sym-  
pathetica  
syncopalis.  
Complicated with  
and re-  
tarded by  
syncope.

SYNCOPE in labour proceeds commonly from a peculiar participation of the stomach in the irritation of the womb, and is hence often connected with a sense of nausea, or with vomiting. Occasionally it occurs also from the exhaustion produced by the violence of the pains; and particularly in relaxed and debilitated habits, in which case the fainting fits sometimes follow up each other in very rapid succession, and require very close attention on the part of the practitioner and the patient's friends.

Remedial  
process.

The usual remedies should here be had recourse to in the first instance: pungent volatiles should be applied to the nostrils, the patient be in a recumbent position, with the curtains undrawn, and, unless the season of year prohibit, with the windows open; the face, and especially the forehead and temples, should be sprinkled with cold-water or ether; and the usual volatile fetids, aromatics, and terebinthines, as camphor, should be given by the mouth: and to these, if necessary, and particularly where

the pulse is feeble and fluttering, should be added a glass or two of Madeira, or any other cordial wine, with twenty drops of laudanum.

If this plan should not answer, and especially if the fainting fits should increase in duration and approximation to each other, the patient must be delivered by the process of turning as soon as ever the os uteri is sufficiently dilated to let the hand pass without force.

One of the worst and most alarming of the associated symptoms in labour is that of CONVULSIONS, and these are often connected with fainting-fits and alternate with each other. We have already glanced at them generally under SYSPASIA CONVULSIO \*, but must dwell a little more at large upon the present modification.

Convulsions may occur during any period of gestation, but we are now to consider them as an accompaniment of labour and as interrupting its progress. Their proximate cause is a peculiar irritation of the nervous system as participating in the irritation of the womb: and hence it is obvious that the radical and specific cure is a termination of the labour.

We cannot always trace the link of this peculiar influence of the womb upon the nervous system: though, where there is a predisposition to clonic spasm of any kind, we can readily account for its excitement, and may be under less apprehension than where it occurs without any such tendency. The occasional causes of fainting are the occasional causes of convulsions; and hence they are apt to follow and particularly in delicate or debilitated constitutions, on the fatigue and exhaustion of violent and protracted pains, great depression of the animal spirits, and profuse hemorrhage. Sometimes, however, they occur where none of these are present, and where the patient is of a strong plethoric habit of body, and especially if it be her first time of pregnancy: and are accompanied with or even preceded by a sense of dizzi-

GEN. II.  
SPEC. III.  
6 P. sympathetica  
syncopalis. Complicated with and retarded by syncope.  
Treatment.  
If this do not succeed the patient to be delivered.  
7 P. sympathetica convulsiva. Parturient convulsions. Proximate cause a peculiar irritation of the womb; hence the only radical cure a termination of the labour.  
Predisponent causes.

Occasional causes.

Sometimes produced by entonic plethora.

\* Vol. III. p. 519.



GEN. II.  
SPEC. III.  
γ P. sym-  
pathetica  
convulsiva.  
Parturient  
convulsions.  
Descrip-  
tion.

ness and oppression in the head, ringing in the ears, or imperfect vision : the plethora itself thus forming the occasional cause.

The attendant symptoms are peculiarly violent, sometimes resembling those of hysteria, sometimes those of epilepsy, but more vehement than in either of these. Nothing can restrain the spastic force of a woman when in parturient convulsions, whatever be her natural weakness. The distortion of the countenance is more hideous than the most extravagant imagination can conceive : and the rapidity with which the eyes open and shut, the sudden twirlings of the mouth, the foam that collects about the lips, the peculiar hiss that issues from them, the stertor, the insensibility, and the jactitating struggle of the limbs, form a picture of agony that cannot be beheld without horror.

Danger of  
rupturing  
the vessels  
in the head  
from the  
violence of  
the action  
whatever  
the occa-  
sional  
cause.  
Hence this  
chiefly to  
be guarded  
against.

The exciting cause is the irritable state of the womb ; and, whatever be the predisponent or occasional cause, whether a debilitated and mobile condition of the nervous system, or a robust and entonic fulness of the blood-vessels, it is obvious that such violence of action cannot take place under any circumstances without endangering a rupture of the vessels in the head, and consequently all the mischiefs of apoplexy. It is against this, indeed, that all practitioners, how much soever they may disagree upon other points, most cordially endeavour to guard, though it rarely happens that effusion in the brain, and some of its results, do not take place in spite of all their exertions.

Medical  
treatment.  
Copious  
bleeding  
and from  
the jugular  
vein.  
The head  
to be kept  
chilled.

The first step is to open a vein and bleed copiously, from a large orifice, till the patient faints : and if the operator be expert, the best vein to make choice of is the jugular : the hair should be immediately removed from the head, and lotions of cold-water, pounded ice, or the freezing mixture, produced by dissolving three or four different sorts of neutral salts in water at the same time, be applied all over it by wetted napkins changed for others as soon as they acquire the least degree of warmth. At the same time a purgative injection should be thrown

Purgatives.

up the rectum, and five or six grains of calomel be given

by the mouth with a draught of sulphate of magnesia in infusion of senna. The paroxysms must, if possible, be put a stop to, the fatal effects they threaten must be anticipated, and not a moment is to be lost.

This is the general plan; and it is to be pursued under all circumstances, though its extent, and particularly in regard to blood-letting, must be regulated by the strength and energy of the patient. The local mode of treatment seems to be somewhat less decided.

It may happen that at the attack of the fits, the os uteri is merely beginning to open, or that it is of the diameter of a crown piece, but peculiarly rigid and undilatable. There are practitioners who, in this case, confine themselves to the depleting plan, and only wait for the advance of the labour: but, in the state of the uterus we are now contemplating, they may have to wait for some hours before the labour is so far advanced as to render them capable of affording any manual assistance whatever, while the fits are, perhaps, recurring every quarter of an hour, and threatening fatal mischief to the brain. And in this case I cannot but warmly approve of the bolder, or rather the more judicious advice of Dr. Bland, who, after a due degree of depletion, recommends a full dose of opium, for the purpose of allaying the nervous irritation generally, and particularly that of the uterus, which is the *punctum saliens* of the whole. A few hours rest may set all to rights, if no vessel have thus far given way in the head: for when the next tide of pains returns, it will commence under very different circumstances in consequence of the reducent course of medicine that has been pursued: and it will rarely be found that the whole body of the uterus is not rendered more lax and plastic, and consequently its cervix, and even the os externum, more yielding and dilatable.

But this is not the common course which the uterus takes under these circumstances; for, in by far the greater number of cases, the whole of this organ, the cervix as well as the fundus, is so exhausted in the general contest, as to be more than ordinarily relaxed and flaccid,

GEN. II.  
SPEC. III.  
P. sym-  
pathetica  
convulsiva.  
Parturient  
convulsions.  
Treatment.  
This plan to  
be pursued  
under every  
modifica-  
tion.

Local  
medical  
treatment.  
State of the  
uterus to be  
cautiously  
watched.  
If the os  
uteri pecu-  
liarily rigid,  
the practi-  
tioner's  
hand must  
be quiet:

but after  
depletion a  
full dose of  
laudanum  
must be  
given.

Commonly,  
however,  
the whole  
uterus re-  
laxed and  
the mouth  
easily dila-  
table.

GEN. II.  
SPEC. III.  
γ P. sym-  
pathetica  
convulsiva.  
Parturient  
convulsions.  
Treatment.

This state  
readily  
capable of  
being ascer-  
tained.

The obvious  
remedy in  
this case to  
break the  
mem-  
branes, and  
turn and  
bring away  
the child.

Such the  
practice of  
Mauriceau,  
Smellie,  
and W.  
Hunter.

and dilatable with considerable ease: insomuch that if the muscular power of the system were now concentrated in a common expulsoy effort, as in natural labours, the whole process would terminate in a few minutes. But unfortunately this muscular exertion, instead of being concentrated, is distracted and erratic, and wandering over all the muscles and organs of the system, producing general mischief instead of local benefit: so that whatever pains there may be they are of far less use than in a state of harmonious action. This may be easily ascertained by introducing the hand on a return of the paroxysm, when the uterus will be found to contract, indeed, but with a tremulous undetermined sort of force, perfectly different from what it does at any other time.

The necessary practice in this case should seem to be obvious and without doubt: the medical attendant seems imperatively called upon to introduce his hand into the os uteri, as soon as it is sufficiently open for him to do so without force, to break the membranes if not broken already, lay hold of the child's feet, deliver by turning, and thus put an end to the convulsions at once, and, consequently, to the fatal effects which seemed to await the mother as well as the child.

Such was the practice recommended by Mauriceau upwards of a century since: La convulsion, says he, fait souvent perir la mere et l'enfant, si la femme *n'est pas promptement secourue par l'accouchement*, qui est le meilleur remède qu'on puisse apporter à l'une et à l'autre \*. This recommendation was adopted generally, and in our own country successively by Smellie, W. Hunter, and Lowder. And although, in circumstances of so much danger, it was not and could not be always successful, yet it was supposed, and with reason, to be the means of saving the life as well of the mother as of the child, in very numerous instances in which that of one or of both would otherwise have unquestionably perished. Some

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\* Traité des Maladies des Femmes grosses. Tom. I. 23. 4to. Paris, 1721.

forty years after the publications of M. Mauriceau's work, Professor Roederer of Goettingen called this practice in question, and recommended that the patient be left to the natural course of the labour\*: and we are told by Dr. Denman that in our own country Dr. Ross, toward the close of last century, "was the first person of late years, who had courage to declare his doubt of the propriety of speedy delivery in *all cases* of puerperal convulsions. The observation," continues Dr. Denman, "on which these doubts were founded, was merely practical, and the event of very many cases has since confirmed the justice of his observation, both with respect to mothers and children †."

GEN. II.  
SPEC. III.  
Parodynia  
sympathe-  
tica.  
Complicat-  
ed labour.  
Treatment.  
Mauriceau  
opposed by  
Roederer  
and after-  
wards by  
Ross.

The sweeping extent of this censure seems to show that the practice had often been had recourse to indiscriminately, and without a correct limitation. And the apparent concurrence of Dr. Denman in Dr. Ross's opinion, together with the undecided manner in which he treats of the question in his subsequent pages, has raised up amongst the most celebrated obstetric physicians of our own day various advocates for leaving in general to nature the case of labour accompanied with convulsions, or at least till the natural efforts of the mother are found completely to fail; and in this last case, as the child's head may be supposed to have cleared the uterus, to have recourse to the perforator or the forceps, according to the nature of the position.

In our own  
day, deli-  
very often  
postponed  
and the case  
left to  
nature.

The chief grounds for this proposed delay, as far as I have been able to collect them, are, that the introduction of the hand into the os internum, in the irritable state of the organ we are now contemplating, is more calculated to renew the convulsions than to put an end to them: that a repetition of them after due depletion has been employed is not so dangerous as is generally apprehended, and consequently that immediate delivery is by no means essential to the patient's safety: and lastly, that we are

Arguments  
for delay.

\* Elementa Artis Obstetricæ. Aph. 679. Goet. 1769. 8vo.

† Practice of Midwifry, p. 586. 8vo. 3d edit. 1816.



GEN. II.  
SPEC. III.  
Parodynia  
sympathe-  
tica.  
Complicat-  
ed labour.  
Treatment.  
Arguments  
examined  
and replied  
to.

not sure of putting an end to the convulsions, even after delivery is effected; since it is well known that they have occasionally continued, and sometimes have not commenced till the process of labour has been long completed.

In reply to this, it may be observed, that if a repetition of the convulsive fits be not so dangerous as is commonly apprehended, a practitioner should feel less reluctance in introducing the hand even though he were sure of exciting a single fit by so doing: and the more so as this single fit might perhaps be the means of terminating the whole, and, consequently, would be a risk bought at a cheap rate. At the same time it should be observed that general experience does not seem to justify the remark that a cautious and scientific use of the hand, where the mouth of the womb is sufficiently dilated, becomes a necessary or even a frequent excitement of fresh paroxysms; and the prediction of such an effect is therefore without sufficient foundation. And if there be a considerable chance, as seems to be admitted, that instrumental assistance will be requisite at last, and that the forceps, or what, in the probability of the child's being still alive is ten times worse, the perforator must be called into action, how much more humane is it, as well as scientific, to employ instrumental aid at first, and thus save the pain and the peril of perhaps many hours of suffering—and particularly when the soft, and supple, and plastic instrument of the hand, may supersede the use of the ruder, and rougher, and less manageable tools of art.

Question:  
further  
examined.

But the most important part of the question is as to the actual degree of danger which is induced by convulsions; and to determine this, nothing more seems necessary than to put the whole upon the footing of an impending apoplexy. It is possible that no effusion in the brain may have taken place at the time when the depleting plan has been carried into execution, but if the paroxysms should still recur, surely few men can look at the violence of the struggle which they induce, at the bloated and distended state of the vessels of the face and of the temples, at the force with which the current of

blood is determined to the head, at the stertor and comatose state of the patient during the continuance of the fit, without feeling the greatest alarm at every return. And that he does not feel in vain is clear, because in various instances the insensibility continues after the paroxysm is over, accompanies her through the remainder of her labour, and is the harbinger of her death.

GEN. II.  
SPEC. III.  
Parodynia  
sympathe-  
tica.  
Complicat-  
ed labour.  
Treatment.

Regarding puerperal convulsions then as a case of impending apoplexy produced by an exciting cause which it is often in our power to remove, it should seem to follow as a necessary and incontestable result, that in this, as in every other case in which the same disease is threatened, our first and unwearied attempt should be to remove such cause as far as it may be in our power, and whenever it is so.

General  
conclusion.

It is not long since that the present author's opinion was requested upon a case of this very kind; but it was by the connexions of the patient who had already fallen a victim to her sufferings. She had been attacked with natural labour-pains and was attended by a female, who, alarmed by the sudden incursion of a convulsion-fit, sent immediately for male assistance. The practitioner arrived, and a consultation was soon held with several others: the os uteri is admitted to have been at this time open to the size of a crown-piece, soft, lubricous, and dilatable. The depleting and refrigerant plan was, however, confided in alone, and the labour was suffered to take its course. Expulsory pains followed at intervals, but the convulsions followed also, and became more frequent and more aggravated: in about six hours from the time of venesection, the patient became permanently insensible, and as the child's head, completely cleared of the uterus, had now descended into the pelvis, it was determined to deliver her by the forceps, which was applied accordingly; and in about an hour afterwards a dead child was brought into the world, whose appearance sufficiently proved that it had not been dead long.

Striking  
illustration.

The source of irritation had now ceased, and with it the convulsions, but the patient continued comatose still:

GEN. II.  
SPEC. III.  
Parodynia  
sympathe-  
tica.  
Complicat-  
ed labour.  
Treatment.

How far  
a general  
issue may  
be drawn  
from a  
single case.

The au-  
thor's view  
supported  
by various  
authorities  
as Smellie,  
Perfect,  
Burns.

yet even this effect went off in seven hours afterwards, and she revived, and gave considerable hopes of recovery. On the second day, however, in consequence of the accession of milk-fever, the convulsions returned, immediately followed with stertor and insensibility, and on the ensuing day she died apoplectic.

To reason from a single instance, whether successful or unsuccessful, is often to reason wrong. Yet it is difficult to avoid conjecturing that if immediate delivery had here taken place as soon as the sanguiferous system had been duly emptied, and when the state of the uterus was so favourable for a trial, two lives might have been spared, both of which were lost under the course pursued. It is true the fits returned with the milk-fever, but had the brain been less injured, there would have been far less danger of such return. The cases of Dr. Smellie and of Dr. Perfect concur in justifying such a conjecture: and the following passage of Mr. Burns should be committed to memory by every student, and every practitioner. "But this is not all," adverting to the necessity of a free depletion, "for the patient is suffering from a disease connected with the state of the uterus, and the state is got rid of by terminating the labour. Even when convulsions take place very early in labour, the os uteri is generally opened to a certain degree, and the detraction of blood which has been resorted to on the first attack of the disease, renders the os uteri usually lax and dilatable. In this case, although we have no distinct labour-pains, we must introduce the hand, and slowly dilate it, and deliver the child. I entirely agree with those who are against forcibly opening the os uteri: but I also agree with those who advise the woman to be delivered as soon as we can possibly do it without violence. There is, I am convinced, no rule of practice more plain or beneficial. Delivery does not, indeed, always save the patient, or even prevent the recurrence of the fits, but it does not thence follow that it ought not to be adopted \*."

\* Principles of Midwifry, p. 359. 3d edit. 8vo. 1811.

## SPECIES IV.

## PARODYNIA PERVERSA.

**Cross=birth.**LABOUR IMPEDED BY PRETERNATURAL PRESENTATION OF  
THE FETUS OR ITS MEMBRANES.

IN the ordinary course of gestation the fetus is rolled up into as small a compass as possible with the breast uppermost, and the head dependent, the legs incurvated and the arms folded: the placenta rises from some part of the fundus, and the umbilical cord hangs at perfect ease in loose folds, or is sometimes turned loosely round the body: thus forming an ellipse whose longer axis corresponds to the longer axis of the uterus. Why the head rather than the breast, or indeed any other part of the fetus should so uniformly constitute the point of presentation, we know not, excepting that it is by far the most commodious point for delivery; and we can hence only resolve it into one of those striking laws of nature which are ever aiming at accomplishing the best ends by the best means, and afford an unvarying and unequivocal proof of design united with benevolence and power.

Here, however, as in every other part of the animal economy, we meet with occasional deviations from the ordinary course of nature, and deviations which are always productive of evil. For it sometimes happens, from incidental causes that are totally concealed from us, that some other part of the child is lowermost or presents itself instead of the head; or that the placenta rises in

GEN. II.  
SPEC. IV.

Natural  
position of  
the fetus in  
the womb.

This position most  
commodious for  
delivery; and dependent  
upon an instinctive  
law of nature.

Morbid deviations  
from this position.



GEN. II.  
SPEC. IV.  
Parodynia  
perversa.  
Cross-birth.

an unfavourable part of the womb, or that the navel-string hangs down below the head and is constantly in danger of being strangled as the child passes through the sharp bones of the pelvis: and hence we have the following varieties of morbid condition offering themselves to us under the present species:

α Faciei.	Presentation of the face.
ε Natium.	Presentation of the breech.
γ Pedis.	Presentation of one or both feet.
δ Brachialis.	Presentation of one or both arms.
ε Transversalis.	Presentation of the shoulder.
ζ Funis prolapsi.	Prolapsed navel-string.
η Placentæ.	Presentation of the placenta.

Present work not designed to instruct in the manual or artificial operations of the obstetric art: but merely to take a view of the conditions in which they will be found necessary: and to offer general remarks.

Presentation of the child unknown before the time of labour: and not positively to be spoken of till the membranes have broken. Explained.

As it is by no means the object of the present work to instruct in the manual or artificial operations of the obstetric art, the author must limit himself to pointing out the different morbid conditions in which such operations will be found necessary. Their nature, mode of accomplishment, and effective instruments are only to be learnt by works written professedly on this subject, or, which is infinitely better, by an attendance on lectures, and such initiatory practice as the obstetric schools afford. A few general or incidental remarks are all that the author can undertake to add to the above table of morbid presentations.

There is no mode of determining what may be the presentation of a child before the commencement of labour, and even at that time it is most prudent for a practitioner to speak with some hesitation on the subject till the membranes have actually broken, and the position is fully decided. For though the real presentation is often sufficiently ascertainable through the membranes themselves, and particularly on the natural descent of the head, yet it has occasionally happened that, on the breaking of the membranes, the head has receded and the shoulder or some other part taken its place; and there are cases in which the opposite and more fortunate

change has occurred of a recession of a presenting shoulder and a descent of the head in its stead\*.

There is hence no foundation for those apprehensions which are often entertained by pregnant women respecting the misposition of the child drawn from some peculiar symptom or feeling which she has never been conscious of on former times, as a singularity in the shape of the abdomen, a sense of the child's rising suddenly towards the stomach, or a numb or painful uneasiness in one leg more than in another. These, and hundreds of other anomalous sensations have occurred in cases where the presentation has at last been found natural, and the labour has proved highly favourable; while on the contrary it is very rarely, when a cross birth is detected, that it has been particularly apprehended by any precursive tokens whatever. And the mind of the timid may hence be comforted in the midst of all the peculiarities on which they are accustomed to hang with daily alarm.

It will rarely be found necessary to have recourse to any mechanical instrument in any of the varieties we have enumerated above: and in some of them, as the breech and foot-presentations, the expulsive powers of nature alone are found sufficient, at least till the head descends into the pelvis: at which time it will be found necessary, whenever the arms lie over the head, to introduce a finger or two and gently draw them down.

Where the face presents, or any other part of the head than the vertex, it was formerly the custom to deliver by turning, but a skilful practitioner of the present day is commonly able, by a dextrous pressure of one or two fingers against particular parts of the head, and particularly if attempted in an early stage of labour, to give the organ a right direction without introducing the hand.

On the presentation, however, of a shoulder or of one

GEN. II.  
SPEC. IV.  
Parodynia  
perversa.  
Cross-birth.  
Hence the  
apprehen-  
sions of  
pregnant  
women  
drawn  
from ima-  
ginary  
tokens un-  
founded :  
such tokens  
being often  
present in  
the natural  
presenta-  
tion and  
absent in  
preterna-  
tural.

Mechanical  
means  
rarely ne-  
cessary in  
any of the  
varieties of  
presenta-  
tion be-  
longing to  
this species.

Face pre-  
sentation.

Shoulder or  
arm pre-  
sentation.

\* Joerg, Hist. Part. p. 90.  
Burns, ut suprâ, p. 292.

GEN. II.  
SPEC. IV.  
Parodynia  
perversa.  
Cross-birth.

or both arms, it will be expedient to turn as soon as possible; or, in other words, as soon as the mouth of the womb is sufficiently dilated for this purpose. It is singular that, while under the old practice, delivery by the feet was often endeavoured in face-cases, attempts were made in arm and shoulder-cases to bring down the head and reduce the labour to a natural course. This it seems has been done and may be done, but with so much fatigue and exhaustion to the patient as to run the risk of incapacitating her for any subsequent efforts, if she do not even fall a sacrifice to a flooding as in a case related by Dr. Smellie. It is to the successful exertions of Paré and Mauriceau that the better practice of the present day has obtained a triumph over all Europe. Yet, in justice to the obstetric practitioners of ancient Greece, it should be observed, that the modern method is little more than a revival of their own which unaccountably sunk into disfavour; for we are told by Ætius, that Philomeles discovered the method, at that time in common use, of turning and delivering children by the feet in all unnatural presentations. Where, however, the child is small, or of premature birth, it may sometimes be taken away without changing the presentation: for the obstetric writers abound in examples of delivery effected under such circumstances by pulling down the arm and drawing the head into the vagina\*.

Spontaneous evolution in shoulder cases.

It sometimes happens that the shoulder is so far advanced into the pelvis before the arrival of the practitioner, or from the vehement force of the uterus, that it is impossible to raise or move the child by the utmost power of the operator: and the state of the case seems to leave the woman without any hope of relief. At this very moment, however, and by these very means the wise and benevolent law of instinct or of nature is inter-

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\* Gardner, Med. Comment. Vol. v. 307.  
Bandelocque, Sect. 1530.  
Burns, ut suprà, 303.

posing to the relief that is despaired of. This wonderful process, though occasionally noticed by earlier writers, and foremost of all perhaps by Schoenheider, in the Copenhagen Transactions\*, was first fully illustrated and explained by Dr. Denman, who distinguished it by the name of a SPONTANEOUS EVOLUTION. His explanation is best given in his own words: "As to the manner in which this evolution takes place, I presume that after the long continued action of the uterus, the body of the child is brought into such a compacted state, as to receive the full force of every returning action. The body in its doubled state being too large to pass through the pelvis, and the uterus pressing upon its inferior extremities, which are the only parts capable of being moved, the latter are forced gradually lower, making room, as they are pressed down, for the reception of some other part into the cavity of the uterus which they have evacuated, till, the body turning as it were upon its own axis, the breech of the child is expelled, as in an original presentation of that part: and consequently is delivered by nature at the time she least expected it." Dr. J. Hamilton, however, has justly observed that this evolution can only take place where the action of the uterus can produce no exertion on the presenting part, or where that part is so shaped that it cannot be wedged in the pelvis: and he might have added where the woman is in full strength and the uterus is capable of exercising a strong expulsive power. And hence, it is a chance that should never be trusted to or suffered to interfere with the common practice of delivering by the feet wherever this can be accomplished.

In all the above cases it is a general rule and one of great importance, to suffer the water of the amnios to accumulate towards the neck of the womb as largely as possible, and to leave the membranes unbroken as long as may be.

GEN. II.  
SPEC. IV.  
Parodynia  
perversa.  
Cross-birth.

Nature of  
such evolution explained.

To what  
circumstances limited.

In all these cases the waters to accumulate, and the membranes to be left unbroken as long as may be.

\* Act. Havn. Tom. II. Art. xxiii.



GEN. II.  
SPEC. IV.  
Parodynia  
perversa.  
Cross-birth.  
Funis pre-  
sentation.

A presentation of the FUNIS is another difficulty often of considerable moment in the progress of labour: for it is obvious that by a check to the pulsation, either actually taking place or being greatly endangered in every pain by the violent pressure of the head or of any other part against the mouth of the uterus, or afterwards against the sides of the pelvis, and consequently against the funis itself, the life of the child is in imminent hazard, and without the exercise of considerable skill, may inevitably be lost. If it be possible to return the prolapsed part of the funis round the head as it is descending, or to hook it against the hand or some other part so as to keep it clear of pressure, this ought to be done by all means. But if this be impossible the child must be turned, as soon as turning is practicable from the dilated state of the os internum: or if the head should have reached the pelvis before the accident takes place, the labour must be accelerated by the patient's using her utmost efforts during every pain; and, if she be too much exhausted for concentrating her strength, it must be quickened by the use of the forceps. But if the pulsation in the chord have already ceased, and we have hereby a proof that the child is dead already, the labour is to be suffered to take its natural course.

Head does not always rapidly follow the descent of the body, in consequence of exhaustion local or general. Hence the funis in danger: and the child often born in a state of asphyxy. The common practice to divide the funis immediately, and use stimulant means by the fire.

It sometimes happens, however, that after the child is turned and the head does not follow the body so speedily as could be wished from the patient's being greatly exhausted,—and the same frequently occurs in breech cases, in consequence of the protracted length of the labour in this presentation,—there is still a considerable danger to the navel string, from its pressure between the child's head and the pelvis. This should be remedied as much as possible by giving the funis full play between the pains. But it frequently occurs, in spite of the utmost caution, that the pulsation is suspended, and the child is born in a state of asphyxy, and apparently lifeless.

The common practice in this case is to tie the navel-string as quickly as possible, remove the child from the mother to the warmth of the fire-place, and endeavour to stimulate the lungs into action by breathing forcibly

into the mouths while the nostrils are closed. Friction with a warm hand, and with the conjoint aid of some pungent volatile, is at the same time applied actively to the chest; and if this do not succeed the nostrils are attempted to be roused with ammonia, or the fauces with a tea-spoonful of brandy and hot water, to excite sneezing or coughing. All this is well; but there is a great and, I am afraid, not unfrequently a fatal error in thus separating the navel string and removing the child from the mother. While it continues united it has two chances of recovery, that of the action of the lungs and that of the re-action of the umbilical artery. By removing it from the mother we allow it but one chance, and that, in my opinion, the feeblest. The expansion of the lungs is altogether a new process, and, like other new processes, does not always take place with great promptness, even where the child is in full life and vigour, and the umbilical artery in regular pulsation; for it is sometimes half a minute or double this time before the child begins to cry, which is the first proof of its respiring. But the flow of the blood through the umbilical artery is an established habit, and, like all other habits, has a powerful tendency to recur if we give it time and favour; and must derive an additional tendency from the stimulus of the posterior placental vessels which are still pulsating, and operating with a *vis à tergo*. Of the various cases of asphyxy on birth which I have witnessed, by far the greater number have proved fatal when treated in the former way, and successful when treated in the latter: and the explanation here given will readily account for the difference.

The PLACENTA itself may, also, form a preternatural presentation, and add much to the difficulty, and the danger of labour. We have said that this rises ordinarily from some part of the fundus of the uterus, though it may originate from its sides, or from some other quarter, for there is no quarter of the womb which may not become its source. Hence it occasionally takes its rise more or less over the mouth of the womb; and while this

GEN. II.  
SPEC. IV.  
Parodynia  
perversa.  
Cross-birth.

This practice erroneous so far as relates to dividing the funis before respiration.  
This opinion explained and illustrated.

Presentation of placenta.

GEN. II.  
SPEC. IV.  
Parodynia  
perversa.  
Cross-birth.

part of the womb continues quiescent, it produces no more inconvenience there than any where else. But the moment labour commences, or even, in the latter months of parturition, when any cause whatever irritates the mouth of the womb, and in any degree puts it upon the stretch, some of the placental vessels must necessarily become ruptured and a hemorrhage ensue. So long as this is small in quantity, and does not frequently return, it will be sufficient to enjoin quiet, a recumbent position, and that the bed be not heated with a profusion of blankets. But if the hemorrhage be considerable, whether before the full time of labour, or on its accession or in any part of it, there is no perfect safety but in delivery, and hereby giving the ruptured vessels an opportunity of closing their mouths. The difficulty is less than a young practitioner might at first expect: for he may be sure, from the hemorrhage itself, that the os uteri is both dilated and dilatable, for if this did not give way neither would the vessels which produce the hemorrhage.

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## SPECIES V.

### PARODYNIA AMORPHICA.

#### *Impracticable Labour.*

LABOUR IMPEDED BY MIS-CONFIGURATION OF THE FETUS,  
OR, OF THE MATERNAL PELVIS.

GEN. II.  
SPEC. V.  
In natural  
labour mu-  
tual adap-  
tation of the  
head and  
the pelvic  
passage.

IN natural labour the size of the head is adapted to the diameter of the pelvis it has to pass through: in some children, indeed, the head is rather larger than in others, or has a difference of shape; and we meet with a like difference in the area of the pelvis: and these cir-

cumstances may prolong the labour, though the expul-  
sory powers of the mother will ultimately triumph over  
the resistance.

But it unfortunately happens that the head is some-  
times so enlarged by monstrosity of structure, hydrops ca-  
pitis, or some other disease, or that the maternal pelvis is  
so deformed in its make, that the child cannot pass through  
the passage, and delivery becomes altogether imprac-  
ticable.

There is, however, an intermediate state between the  
natural size of the pelvis with a head of a natural size ap-  
plied to it, and that of absolute impracticability from the  
utter inaccordance of the head to the opening; in which,  
though the most violent and best directed pains of the  
mother may not be sufficient to produce expulsion, this  
object may be effected by the assistance of instruments  
cooperating with the natural efforts.

What space of pelvis is absolutely necessary to enable  
a living child, at its full time, to pass through it, has  
not been very accurately settled by obstetric writers, some  
maintaining that this cannot take place where the con-  
jugate diameter is less than two inches and a half, though  
it may till we reach this degree of narrowness; and others  
that it cannot take effect under three inches. The dif-  
ference in the size of the head in different children on  
their birth, and of the thickness of the soft parts within  
the pelvis in different women may easily account for this  
variation in the rule laid down. It is clear, however,  
from the acknowledgment of both parties, that if the di-  
mensions of the pelvis be much under three inches, de-  
livery cannot be accomplished without the loss of the  
child: and it is also clear that if the head be much en-  
larged beyond the natural size from any cause whatever,  
it cannot pass even through the ordinary dimensions,  
thus giving us the two following sources or varieties of  
difficult labour from an amorphous cause.

α. A fetu.

The fetus deformed by a preternatural  
magnitude of head, or some other  
morbid protuberance.

GEN. II.  
SPEC. V.

Parodynia  
amorphica.

Impracti-  
cable  
labour.

This mutu-  
al adapta-  
tion some-  
times inter-  
fered with  
by the

figure of  
the child's  
head, or  
the mater-  
nal pelvis,  
so much so  
as to ren-  
der a pas-  
sage im-  
practicable.

The pro-  
portions  
sometimes  
so near as  
that deli-  
very,  
though not  
practical  
by natural  
efforts, may  
be obtained  
by the aid  
of mecha-  
nical in-  
struments.

Necessary  
diameter  
of the  
pelvis.



GEN. II.  
SPEC. V.Parodynia  
amorphica.Impracticable  
labour.The judgement of  
more importance  
than a direct mea-  
sure of the  
pelvis in  
every separate case.Patient to  
be allowed  
to proceed  
naturally  
in doubtful  
cases till  
the powers  
of body  
and mind  
begin to  
fail, and  
then a use  
of the vectis  
or the for-  
ceps.

## 6 Pelvica.

The pelvis contracted in its diameter  
by natural deformity, or subsequent  
disease or injury.

It is by no means easy to determine what is the actual measurement of the hollow of the pelvis in a living woman, and particularly during the time of labour: and hence, how useful soever it may be to be acquainted with what ought to be its precise capacity as taken under other circumstances, the judgement must chiefly determine as to the practicability or impracticability of the passage from a calm attention to the individual case at the time, and particularly where the difficulty proceeds from the form of the child rather than from that of the mother. If, in well weighing the circumstances, the question remain doubtful, the patient should be allowed to proceed with her natural exertions alone, or such only in addition as the hands may be able to afford, till the strength is considerably exhausted, and the mind participates in the depression of the body. And if at this time, as will probably be the case, the head has descended so low as to be in contact with the perinæum, and an ear can be felt, it would be imprudent to delay any longer assisting her with the vectis or the forceps.

But the case may not be doubtful, and the passage may be so much contracted as to render all attempts to accomplish delivery by the hands or the ordinary instruments totally ineffectual from the first. In this situation other means must be resorted to, or the mother and the child must both perish, worn out by fatigue, and perhaps rendered gangrenous in the points of contact from irritation and inflammation.

The means that present themselves to the practitioner on this occasion are the three following: He may reduce the head of the child by the crotchet or perforator. He may, in a small degree, enlarge the diameter of the pelvis by dividing the symphysis pubis. Or, he may make a section through the abdomen into the uterus.

But the  
case may  
not admit  
of a passage  
for the  
child, even  
with instru-  
ments.

In this case  
the means  
to be re-  
sorted to  
are three-  
fold:

a reduction  
of the head:  
a division of  
the sym-  
physis: or  
the  
Cesarean  
section.

The first of these methods is designed to save the mother by a voluntary sacrifice of the child. The two last give a chance to the child; but at an imminent hazard of the mother.

Where the difficulty proceeds from a morbid enlargement of the child's head, the question as to which of these three methods of treatment should be adopted, ought not to admit of a moment's debate. The child is, perhaps, dead already, or, if not, it is not likely that it would long survive the deformity it labours under, or live so as to render life a blessing: and the life of a sound woman must not be risked, and still less sacrificed, for the chance of saving an unsound child. The head, therefore, ought to be diminished, and consequently the perforator to be had recourse to.

But there are instances of a deformity of the pelvis so considerable as that the perforator cannot be employed to any advantage: for how much soever the cranium may have been broken down, there may not be breadth enough to extract the child in any way. And this will always be the case where the range of the pelvis is under an inch and a half from the pubis to the sacrum, or on either side. Dr. Osborn asserts that he once succeeded in removing a child by means of the crotchet in a case where the widest side of the pelvis was only an inch and three quarters broad, and not more than two inches long\*; which is a capacity so narrow as to throw some doubt upon the accuracy of the measurement in the minds of many practitioners†, and certainly so narrow as to form an unparalleled case in the annals of the obstetric art.

In situations, therefore, of this kind, some other plan must be pursued even to save the life of the mother; and the only plans that can even be thought of are that of dividing the symphysis of the pubis, and that of the Cesarean section.

GEN. II.  
SPEC. V.  
Parodynia  
amorphica.  
Impracticable  
labour.

Reduction  
of the head  
by the perforator.

This to be  
employed  
without  
hesitation  
where the  
head is  
morbidly  
enlarged:  
and on  
what  
grounds.

But the  
pelvis may  
be so de-  
formed as  
to render  
delivery  
even in this  
way im-  
practicable.

Hencesome  
other plan  
must be  
pursued.

\* Osborn's Essays, p. 203.

† Burn's Princ. of Midwifery, p. 351.

GEN. II.  
SPEC. V.  
Parodynia  
amorphica.  
Impracticable  
labour.

Division of  
the sym-  
physis of  
the ossa  
pubis; how  
far appli-  
cable.

This opera-  
tion, when  
first pro-  
posed,  
and by  
whom.

By whom  
first tried.

Success of  
M. Sigault.

History of  
his first  
case.

Towards the latter months of pregnancy there seems to be a disposition in the bones of the pelvis to separate at their symphysis, insomuch that some pregnant women are sensible of a motion at the junction of the bones, especially at that of the ossa pubis \*. This has been known to anatomists for some centuries, and about seventy years ago, for the first time, gave rise to a question whether advantage might not be taken of this tendency in cases of pelvic contractions, to enlarge the space by dividing the ossa pubis at their symphysis, and thus obtain the same end as is answered by the Cesarean section, with a considerable diminution of risk. The operation seems first of all to have been proposed by M. Louis of the French Academy of Surgery to Professor Camper of Groningen, who tried it first on a dead female body, and found it would afford space, and next on a living pig, which, for some days afterwards, was incapable either of walking or standing, but in a few weeks perfectly recovered. He was then desirous of trying it upon a young woman condemned to death at Groningen, but did not succeed in his request. Not long afterwards, however, it was performed with complete success by M. Sigault of Paris upon the wife of a soldier who had hitherto borne four children, each of which, from the mother's misformation, was obliged to be extracted piece-meal. The section of the cartilage connecting the ossa pubis enabled the bones to be separated, according to his account, by a chasm of two inches and a half; and yielded a free passage to the child in four minutes and a half. The wife, with her husband and child, a few weeks afterwards, presented themselves to the members of the faculty assembled in their hall. The patient walked steadily and was found to be perfectly recovered †. Mr. Le Roy, who was requested to attend on the occasion, tells us that the same operation was afterwards performed by two other prac-

\* Denman. Pract. of Midwifry, p. 46. 446.

† Méd. Comm. Edin. Vol. v. p. 214.

tioners on two other women, and in both cases with an equally happy termination. He also observes that although, in an unimpregnated state, the bones of the pelvis cannot be made to separate upon a division of the symphysis to a space of more than an inch, which would be insufficient for the purpose proposed, the additional softness and flaccidity which take place during pregnancy, as well in the bones and cartilages as in the muscles, is so considerable, that a separation of two inches and a half may be easily effected in labour and was effected in the above cases, while the same bistoury that divided the soft parts, easily also divided the cartilage \*. In various other parts of the Continent, and especially at Mons and in Holland it has been repeated with complete emancipation both to the child and mother. Dr. J. H. Myers, who witnessed it at Paris, speaks of it in the highest terms of commendation. He says that the length of the incision does not exceed three inches, and that the whole operation is over in less than five minutes: while in the Cesarean operation the wound is necessarily more than nine inches long, the uterus is divided, and the surrounding viscera are uncovered. "I have seen," says Dr. Myers, "the operation twice performed in this capital with every possible success. The last patient, while I am writing, is in the room, coming to show herself in justice to her operator. It is only eighteen days since the operation was performed, and she is in perfect health, and by no means injured by it †."

GEN. II.  
SPEC. V.  
Parodynia  
amorphica.  
Impracticable  
labour.

Extent to which the bones will separate in pregnancy compared with their power at other times.

Operation since performed in various other parts. Account of the operation given by Myers.

Operation decried from occasional failure: and sometimes performed unskilfully.

The operation, however, has been decried, and, in some instances, has certainly failed; but there appears to be some doubt whether, in several of these cases at least, if not in all, it was conducted with a sufficient degree of dexterity and skill: for when we are told by one operator that, after the division of the symphysis he could not effect an opening of much more than a finger's

\* *Recherches Historiques et Pratiques sur la Section de la Symphyse du Pubis*, &c. Paris. 8vo. 1778.

† *Edin. Med. Comment.* Vol. vii. p. 453.



GEN. II.  
SPEC. V.  
Parodynia  
amorphica.  
Impracti-  
cable  
labour.

Performed  
by Lambon  
twice on  
the same  
patient.

Undue pre-  
judice  
against the  
operation  
in our own  
country.

Whence its  
origin.

Character  
of the ope-  
ration as  
given by  
Denman :

and expe-  
riments to  
prove its  
range and  
safety.

breadth, and by another that the utmost extent of the hiatus was not more than an inch and a half, and compare these remarks with the following assertion of Dr. Myers upon this very point, it is difficult to come to any other conclusion. "The moment," says he, "the division is made, there is an enlargement of the pelvis, I venture to say, to any extent desired: the last I saw was three inches, accurately measured by an instrument called *pelvimetre*, contrived by Mr. Trainel." To which we may add that M. de Lambon performed the operation twice on the same patient; in the first instance without injury to the mother, and in the second with success to both mother and child\*.

After these decisive facts in its favour, to which the reader may add others from the volume of Nosology, I cannot but conceive that the prejudice against it, in our own country, has been carried too far. One experiment alone has been made amongst ourselves, and that with an unsuccessful issue. But the chief opposition to it seems to have proceeded from the discountenance of Dr. Denman, added to certain experiments made in relation to it by Dr. William Hunter, which do not seem to have been conducted under circumstances that can fairly call in question the truth of the preceding statements.

"Immediately," says Dr. Denman, "after the accounts of the operation were brought into this country, wishing, as a matter of duty, to understand the ground of the subject, I had a conference with the late Mr. John Hunter, in which we considered its first principle, its safety; and after the most serious consideration it was agreed that, if the utility could be proved, there appeared from the structure of the parts, or from the injury they were likely to sustain by the mere section of the symphysis, no sufficient objection against performing it. Of its real utility it was, however, impossible to decide before many experiments had been made on the

\* Leake's Practical Observations on the acute Diseases of Women. 8vo.

DEAD body, to ascertain the degree of enlargement of the capacity of the pelvis, well-formed or distorted, which would be thereby obtained. Such experiments were soon made: and their result published by the late Dr. Hunter, and these proved on the whole that, in extreme or great degrees of distortion of the pelvis, the advantage to be gained was wholly insufficient to allow the head of a child to pass without lessening its bulk: and in small degrees of distortion that the operation was unnecessary, such cases admitting of relief by less desperate methods. They proved, moreover, that irreparable injury would be done by attempts to increase the common advantages gained by the section of the symphysis by straining or tearing asunder the ligaments which connect the ossa innominata to the sacrum, and to the soft parts contained in the pelvis, particularly to the bladder\*."

GEN. II.  
SPEC. V.  
Parodynia  
amorphica.  
Impracticable  
labour.

Now it did not require these experiments to prove that this operation, or almost any other, would become mischievous if unskilfully performed, but surely it was something too much to endeavour to set aside the facts and results known to have taken place in very numerous instances in the *living* body, and to call in question the veracity of those who made them and those who witnessed them, by facts and results made merely on the *dead* body, without one single experiment on the body while alive and in the peculiar circumstances under which alone it is admitted that the facts and results contended for could possibly take place.

Examination of the above experiments.

In what respects inconclusive.

Upon the whole it is allowed in the passage just quoted, as the concurrent opinion of Dr. Denman himself, Mr. John Hunter, and apparently Dr. William Hunter, and this too after "the most serious consideration,"—that "there appears from the structure of the parts or from the injury they are likely to sustain, by the mere section of the symphysis, no sufficient objection

General result.

\* Denman's Practice, &c. 447.

GEN. II.  
SPEC V.  
Parodynia  
amorphica.  
Impracticable  
labour.

against performing the operation." That it will answer in every degree of a contracted pelvis was never asserted by its most sanguine advocates, but only in cases where the construction was somewhat too considerable to allow of the extraction of the child by the forceps. And lastly, it is after all admitted by Dr. Denman himself, that where the life of a child is of more than ordinary importance from public or other considerations, and the mother who is in labour with it possesses a pelvis so deformed and contracted, that it cannot pass through the passage in its present state, "there the section of the symphysis of the ossa pubis might be proposed and performed,—being less horrid to the woman than the Cesarean operation, and instead of adding to the danger, giving some chance of preserving the life of the child \*."

Division of the symphysis unavailing when the passage is extremely narrow. In which case the patient must be left,

It is perfectly clear, however, that, be the advantages of dividing the symphysis what they may when the pelvis is under certain states of deformity, it is an operation that can never be of any avail where the passage is so narrow that the child cannot be brought away piece-meal even by the use of the perforator. And in such circumstances the only alternative is to leave the patient to nature, in the slender and desperate hope that the pains may gradually wear away as the parts become habituated to the irritation, and the child, as in many cases of extra-uterine fetation, be thrown out in detached fragments by an abscess; or to have recourse to what has been called the Cesarean operation, and deliver by making a section into the uterus through the abdomen.

or recourse had to the Cesarean operation.

Maternal love, or a sense of duty has often prevailed on women to submit to this operation: and from a remote period of the world,

The love of offspring, or a sense of duty, has been so prevalent in some women as to induce them to submit to this severe trial in cases where the pelvis has by no means been so straitened as we are now contemplating. And these motives not being confined to any particular age, the operation is of considerable antiquity, and is particularly noticed by the elder Pliny, who tells us

\* Denman, ut supr. 449.



that the elder Scipio Africanus, and the first of the Cesars were brought into the world in this manner, and adds, that the name of Cesar was hence derived "*à caso matris utero* \*." In recent times, one of the earliest cases in which it was submitted to was that of the wife of a cattle-gelder at Siegen-hausen in Germany in the beginning of the sixteenth century. The child it seems was, from its size, supposed to be incapable of being expelled in the natural way, and the operation was performed by the cattle-gelder himself. Barehin, in his Appendix to Rousset, who was a warm supporter of the practice, and wrote in favour of it in 1581, tells us that this woman did well and bore several children afterwards in the natural way. There are a few other instances related of its having been executed by lay hands, and with equal success; particularly one performed in Ireland by an uninstructed midwife whose instrument was a razor. The case is related by Mr. Duncan Stewart in the Edinburgh Medical Essays†, who saw the woman a few days after the operation. She was well in about a month. Among regular practitioners, however, it has been generally opposed on account of its very doubtful result, from the time of Paré and Guillemear, who warmly resisted its employment. Dr. Hull not long since made a collection of all the cases in which the operation had been performed both at home and abroad, and calculated them at 231, of which 139, being considerably more than half, had proved successful‡. The German collections, indeed, give various examples of its having been repeated several times on the same person: and M. Trestan narrates the extraordinary history of one woman who had submitted to it not fewer than seven times§. One of the latest examples is, I believe, the case furnished by Dr. Locker of Zurich, and published

GEN. II.  
SPEC. V.  
Parodynia  
amorphica.  
Impracticable  
labour.

Scipio  
Africanus  
and the  
first of the  
Cesars thus  
born.

Revived by  
lay hands  
in recent  
times.

Examples  
in Ger-  
many:

in Ireland.

Result  
upon the  
whole very  
doubtful,

Proportional fatality.  
Has been  
performed  
several  
times on  
the same  
person.  
Case of late  
occurrence.

\* Hist. Nat. Lib. vii. cap. ix.

† Vol. v. p. 360.

‡ Translation of M. Bandeloque's Memoir, p. 233.

§ Journ. de Medicine, Tom. xxxvi. p. 69.



GEN. II.  
SPEC. V.  
Parodynia  
amorphica.  
Impracti-  
cable  
labour.

Has proved  
peculiarly  
fatal in our  
own coun-  
try.  
Exempli-  
fied.

Want of  
success how  
explained  
by Hamil-  
ton.

in a late volume of the Transactions of the Medico-Chirurgical Society; in which the mother and child were both happily preserved \*.

Under this view of the subject it is singular to observe the general fatality, at least to the mother, with which the Cesarean section has been followed in our own country. "There are, I think," says Mr. Burns, "histories of twenty cases where this operation has been performed in Britain: out of these only ONE woman has been saved, but ten children have been preserved †."

At Edinburgh, Mr. Hamilton remarks ‡, that it had been performed five times at the date of his publication: and that in no instance had the patient the good fortune to survive it many days. Of the last case he was an eye-witness, and it was only resorted to after every other means had proved ineffectual: the child was saved but the mother survived only six and twenty hours. This ingenious writer enters with great pertinence into the question to what cause so general a failure is to be ascribed. And while he admits that nervous or uterine irritation from cutting, internal hemorrhage, or an extravasation into the cavity of the abdomen may each have an influence; he is disposed to think that its unsuccess is principally to be imputed to the effect which access of air is well known to have on viscera exposed and in a state of irritation. Dr. Monro repeatedly found that, in making even a large aperture by incision into the abdomen of animals, if the wound be quickly closed the animal readily recovers: but that if the viscera be exposed for only a few minutes to the air, severe pains and fatal convulsions ensue. And hence Mr. Hamilton most warmly exhorts that, in performing the Cesarean operation, the bowels be denuded as little as possible, and the wound be closed with the utmost expedition.

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\* Vol. ix. p. 11.

† Princip. ut supr. p. 348.

‡ Elements of the Practice of Midwifry, 8vo.

This answer, however, is hardly satisfactory: and I am rather inclined to think that the comparative want of success at home, is owing to the greater reluctance in performing the operation than seems to be manifested in France and Germany, in consequence of which it is rarely determined upon till the woman is too far exhausted, and has an insufficiency of vigour to enable the wounded parts to assume a healing condition. In most of the cases recorded, there does not seem to have been any deficiency of skill; and particularly in that which occurred about five and thirty years since, and was attended by Mr. John Hunter and Dr. Ford\*, and hence the unfavourable issue must be resolved into some other cause.

GEN. II.  
SPEC. V.  
Parodynia  
amorphica.  
Inpracti-  
cable  
labour.  
The expla-  
nation  
hardly sa-  
tisfactory;  
and the  
want of  
success  
ascribed to  
another  
cause.

It is happy for the world, and peculiarly so for those who are possessed of a contracted pelvis, and in many cases without knowing it till they are in labour, that a far safer, and less painful operation may be had recourse to, where the deformity is known in due time, I mean that of a PREMATURE DELIVERY. "A great number of instances have occurred," says Dr. Denman, "of women so formed that it was not possible for them to bring forth a living child at the termination of nine months who have, in my own practice, been blessed with living children by the accidental coming on of labour, when they were only seven months advanced in their pregnancy, or several weeks before their due time. But the first account of any artificial method of bringing on premature labour was given to me by Dr. C. Kelly. He informed me that about the year 1756, there was a consultation of the most eminent men at that time in London to consider of the moral rectitude of, and advantages which might be expected from, this practice; which met with their general approbation. The first case in which it was deemed necessary and proper fell under the care of the late Dr. Macaulay, and it terminated successfully. The patient was the wife of a linen-draper in the Strand. Dr.

Premature  
delivery:  
its great  
benefit in  
these cases.

Illustrated.

Origin of  
the prac-  
tice in  
London.

Success in  
the first  
case.

\* Denman, ut supr. p. 463.

GEN. II.  
SPEC. V.  
Parodynia  
amorphica.  
Impracti-  
cable  
labour.

More  
striking  
success on  
a subse-  
quent trial.

Kelly informed me that that he himself had practised it; and, among other instances, mentioned that he had performed this operation three times upon the same woman, and twice the children had been born living.

“A lady of rank,” continues the same writer, “who had been married many years, was soon after her marriage delivered of a living child in the beginning of the eighth month of her pregnancy. She had afterwards four children at the full time, all of which were, after very difficult labours, born dead. She applied in her next pregnancy to Dr. Savage, whom I met in consultation. By some accounts she had received she was prepared for this operation, to which she submitted with great resolution. The membranes were accordingly ruptured, and the waters discharged, early in the eighth month of her pregnancy. On the following day she had a rigor, succeeded by heat and other symptoms of fever which very much alarmed us for the event. On the third day, however, the pains of labour came on, and she was, after a short time, delivered, to the great comfort and satisfaction of herself and friends, of a small but perfectly healthy child, which is at this time nearly of the same size it would have been had it been born at the full period of utero-gestation; and it has lived to the state of manhood. In a subsequent pregnancy the same method was pursued, but whether the child was of larger size, or the pelvis was become smaller, whether there was any mistake in the reckoning, or whether the child fell into any untoward position, I could not discover, but it was still-born though the labour did not continue longer than six hours. Yet in a third trial the child was born living and healthy, and she recovered without any unusual inconvenience or trouble\*.”

Interval  
between  
rupturing  
the mem-  
branes and  
the acces-  
sion of the  
labour-  
pains varies  
in different  
individuals.

It is only necessary to add, that the time in which labour-pains will come on after thus rupturing the membranes and discharging the waters, is uncertain, and ap-

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\* Epist. App. ad Strauss de foetu. Mussipont. p. 298.

pears to depend much on the irritability of the uterus. It is sometimes delayed, as in the first trial in the case just noticed, for three days, but the labour has sometimes, also, been found to commence within a few hours.

GEN. II.  
SPEC. V.

## SPECIES VI.

### PARODYNIA PLURALIS.

#### *Multiply Labour.*

##### LABOUR COMPLICATED BY A PLURALITY OF CHILDREN.

THE fertility of women seems to depend upon various circumstances, partly, perhaps, the extent or resources of the ovaria, partly constitutional warmth of orgasm, and partly the adaptation of the male semen to the organization of the respective female. Eisenmenger gives us the history of a woman who produced fifty-one children \* : and sometimes the fertility seems to pass from generation to generation, in both sexes, though it must be always liable to some variation from the constitution of the family that is married into. I have in my own family at the time of writing, a young female servant whose mother bore twenty-three children, and brought them up with so much success, that at the time of her mother's death, she was the youngest of nineteen then living : and her eldest brother has fourteen children at present, all of whom I believe are in health.

But while some women produce thus rapidly in single succession, there are others that are multiparient, and bring forth occasionally two or even three at a time, more than one ovum being detached by the orgasmic shock. Three at a time is not common : I have met with but one

GEN. II.  
SPEC. VI.

Fertility dependent on various circumstances. Fifty-one children produced by one woman.

Constitutional fertility hereditary.

Multiply-fertile fertility. Three at a birth.

\* Epist. App. ad Strauss de factu. Mussipont, p. 228.



GEN. II.  
SPEC. VI.  
Parodynia  
pluralis.  
Multipli-  
cate labour.  
Sometimes  
four.  
Five re-  
ported but  
upon doubt-  
ful autho-  
rity.  
Twins  
mostly pro-  
duced at a  
common  
birth: but  
occasion-  
ally at  
different  
periods.

instance of it in which the children were all alive and likely to live; and one instance only occurred to Dr. Denman in the course of upwards of thirty years practice. Four have occasionally but very rarely been brought forth together, and there are a few wonderful stories of five, but which rest on no well-authenticated testimony.

Twins are mostly produced at a common birth, but, owing to the incidental death of one of them while the other continues alive, there is sometimes a material difference in the time of their expulsion, and consequently, therefore, in their bulk or degree of maturity, giving us the two following varieties:

- |   |  |  |
|---|--|--|
| α | Congruens.<br>Congruous twin-<br>ning.     | Of equal or nearly equal growth,<br>and produced at a common<br>birth. |
| ε | Incongruens.<br>Incongruous twin-<br>ning. | Of unequal growth, and pro-<br>duced at different births.              |

α-P. plura-  
lis congrua.  
Congruous  
twinning.

IN CONGRUOUS TWINNING or ordinary twin cases, in which there is no great disparity of size between the two, on the birth of the one, it can be pretty easily ascertained that another is still in the womb by applying the hand to the abdomen; for the limbs, and, if the child be alive, its movements, may generally be felt very distinctly, except, indeed, when an ascites is present, and the practitioner must then have recourse to other tokens.

No precise  
signs by  
which preg-  
nancy with  
twins can  
be ascer-  
tained.

There are no precise signs by which a woman or her attendant can determine whether she be pregnant of twins or not. Inequalities in the prominence of the abdomen, peculiarities of internal sensation or motion, slowness in the progress of a labour, have been advanced as signs; but they belong as frequently to the uniparient as to the multiparient, and hence are unentitled to attention.

Priority of  
birth in  
twins de-  
pendent on  
conveni-  
ence of  
position for  
birth.

The claim to priority of birth in a twin case is dependent, not on superiority of strength, or any other endowment, but on a closer proximity to the mouth of the uterus alone, and, consequently, on a greater conve-

nience of position. Though when, on the birth of twins, one is found small and emaciated, and the other plump and strong, we have some ground for apprehending that the vigorous child has absorbed the greater part of the nutriment afforded by the mother, as we find not unfrequently in plants shooting from the same spot of earth.

The general rules that govern in morbid labour of individual children, govern equally in morbid labour of twins. The second child is usually delivered with comparatively few pains and little inconvenience, as the parts have been sufficiently dilated by the passage of the first; and, although there is commonly some interval between the termination of the one and the commencement of the other struggle, it is not often that this interval exceeds half an hour or an hour. It has, indeed, in a few instances extended to whole days; in one instance to ten \*, and in another to seventeen days †. But these are very uncommon cases: and as mischief may possibly happen to the womb, and to the system at large from a long protraction of uterine irritation, it is now the practice to deliver the second child by art, after having waited four or five hours in vain for a return of expulsive exertions.

In INCONGRUOUS TWINNING we meet in different cases with every possible diversity in perfection of form, and term of expulsion between the co-offspring. Nor is this to be wondered at in either respect. We have already seen that a single fetus may die during any period of parturition from a variety of causes: and hence we may readily conjecture that one of the twins may die at any period, while the other still thrives and remains unaffected. This twin may remain in the womb, and both be expelled together at the full time. But it may happen, also, from the peculiar irritation of the uterus generally, or the peculiar position of the dead fetus near the cervix, that this organ may be so far stimulated by the death, and

GEN. II.  
SPEC. VI.  
α P. pluralis congrua.  
Congruous twinning.

General rules of morbid labour of single children govern in twin cases:

commonly some interval between the expulsion of the one and the other.

Has extended to a day or two: to ten days: to seventeen.

But this should not be allowed.

ε P. pluralis incongrua.

Incongruous twinning.

Physiology and explanation:

one may thrive while the other is dead:

and the first be expelled while the second remains its full time.

\* Hist. de l'Acad. des Sciences, 1751, p. 107.

† De Boset in Verhandeligen van Harlem, xii. App. No. 6.

GEN. II.  
SPEC. VI.  
6 P. pluralis incongrua.  
Incongruous twinning.

Hence the mother on the birth of the second may imagine she has not been more than six or seven months pregnant. These facts formerly accounted for by the doctrine of superfetation.

Superfætation occasionally may occur in quadrupeds, but cannot in women. Explanation.

Hence this doctrine now in disrepute.

corrupt state of the fetal corse and its membranes, as to expel it from the body, while the living child receives no injury, and continues to thrive, and is maturely delivered at its proper time.

In the latter case, where the dead fetus has been discharged in the second or third month of pregnancy, the mother, not knowing herself to have been pregnant with twins, has been erroneously conceived, on the arrival of the second birth, to have produced a perfect child within the short term of six or seven months.

In the former case, or that in which the dead fetus remains quiet in the womb through the remaining term of pregnancy and both are discharged at a common birth, an opinion equally erroneous was formerly entertained in order to account for the apparent difference of the two in growth and size: for it was supposed that the dead and puny, and apparently premature fetus, was conceived some months subsequently to the perfect and vigorous child, and hence had not time to reach it in size and perfection: and to this supposed subsequent conception was given the name of SUPERFETATION.

We have reason to believe that such a process does occasionally take place in some quadrupeds whose wombs are so formed as to allow of it: but we have already observed in the preliminary Proem to the present Class, as also in the introductory observations to the present Order that, in women, from the moment of conception, an efflorescent membrane is formed which lines the whole cavity of the uterus, and acts as a septum to the ascent of any subsequent tide of male semen; not to say further that the os uteri itself is so plugged up by the secretion of a viscid mucus at the time as to prevent any communication between this organ and the vagina till the period of pregnancy is completed. And hence the doctrine of superfætation in women has deservedly sunk into general disrepute\*.

\* Waldschmied, Dissert. de Superfætatione falso præstans à Hanb. 1727.



The cases of this kind, and formerly ascribed to this cause, are by no means uncommon. Dr. Maton has given a very decided one in the Medical Transactions, containing the history of a lady delivered at Palermo of a male child in November 1807, and again, scarcely three months afterwards, in February 1808, of another male infant, "completely formed\*." The proportion or powers of the first child are not sufficiently noticed: but we are told that both were born alive; that the elder died when nine days old "without any apparent cause;" and that the younger died also, but after a longer term.

In Henschel we have an account of a minute † and a mature fetus born at the same time: and in the Transactions of the Medico-Chirurgical Society, a similar account by Mr. Chapman with the exception of the time which varied considerably: the dead and minute fetus, apparently not more than three or four months old, having in this case been born in October 1816, and the twin, a full-grown child, not till December, just two months afterwards ‡.

In this last instance, however, there can be no doubt that the aborted fetus had remained quiet in the uterus for some months after its death before it was expelled; which in truth is the only way of reconciling its apparent age and size of not more than three or four months at the time of its expulsion, with the full time or nine months of the mother, completed only two months afterwards.

Nor is a quiet and undisturbing continuance in the uterus after the death of the fetus by any means uncommon, whether the offspring be single or double. We have already given examples of an interval of ten, and even seventeen days, in the case of twins born equally of full size. But where the growth has been discrepant, and the dead fetus has remained behind unsuspected, it has sometimes been several months before expulsion has

GIN. II.  
SECC. VI.  
C P. plur.  
lis incon-  
grua.  
Incongru-  
ous twin-  
ning.  
Example of  
incongru-  
ous feta-  
tion.

Further  
illustrated.

Examined  
and ex-  
plained.

Undisturb-  
ing conti-  
nuance of a  
fetus in the  
womb after  
death, not  
uncommon.

\* Vol. iv. Art. xii.

† Neue Medicinische und Chirurgische Anmerkungen, B. II.

‡ Vol. ix. p. 195.



GEN. II.  
SPEC. VI.  
c P. pluralis incongrua.  
Incongruous twinning.  
Has continued a twelvemonth: and double this time.  
Illustrative fact.

taken place. Ruysset gives a case in which it was delayed a twelvemonth, after the apparent term of its death, and even then discharged without corruption\*: and some of the foreign collections have instances that more than double this time †.

The present author was lately engaged in consultation upon the case of a lady in Bedford Row, who had miscarried of a fetus under three months old, which there was every reason to believe died four months antecedently; as at that time the mother had been attacked with a flooding and rigors, had had various subsequent uterine hemorrhages, and had never been able to quit a recumbent position without producing some return of the bleeding.

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## SPECIES VII.

### PARODYNIA SECUNDARIA.

#### Sequential Labour.

#### DISEASED ACTION, OR DISTURBANCE SUCCEEDING DELIVERY.

GEN. II.  
SPEC. VII.  
In ordinary child-birth no difficulty after the expulsion of the fetus: but from particular circumstances great difficulty and distress.

In ordinary child-birth the pains of labour may be said to cease with the expulsion of the fetus: since though sequential, or after-pains as they are ordinarily called, are not uncommon for a day or two, and are useful in expelling the placenta and its membranes, and a few large coagula of blood that have formed in the uterus, these last are neither violent nor by any means frequent.

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\* Thesaur. omnium max.

† Nene Samml. Wahrnehmungen. Band. iv. p. 241.

It sometimes happens, however, that there is almost as much trouble, and as much pain, and as much danger after the birth of the child as antecedently, so that the labour itself may be fairly said to be protracted into this secondary stage, which offers the following varieties of morbid affection:

α Retentiva.	Retention of the secundines.
β Dolorosa.	Violent after-pains.
γ Hæmorrhagica.	Violent hemorrhage or flooding.
δ Lochialis.	Profuse lochial discharge.

GEN. II.  
SPEC. VII.  
Parodynia  
secundaria.  
Sequential  
labour.

In about ten minutes or a quarter of an hour after the birth of the child the uterus recovers its action, and again exerts itself, though with less force, and consequently slighter pain, to expel what is commonly called the after-birth, consisting of the placenta and its membranes; which in common cases are easily separated and thrown off from the sides of the organ. The instinctive or remedial power of nature is just as competent of itself to do this as to expel the child; but, as unquestionable benefit is found from assisting in the expulsion in the latter case, a like degree of benefit is also found in the former; and the practitioner by taking hold of the funis, and gently pulling it during the action of a pain, will in most cases, be sure of expediting the passage of the placenta, without running the least risk of rudely tearing it from the sides of the uterus, and exciting a hemorrhage.

α P. secundaria re-  
tentiva.  
Retention  
of the se-  
cundines.  
Usually ex-  
pelled by  
natural  
efforts:

but may  
generally  
be assisted  
by moving  
the funis.

It will sometimes however be found that the funis, instead of being fully inserted at its upper extremity into the body of the placenta, originates alone from a few of its vessels, and that from an incautious tug it gives way, and is drawn down by itself, leaving the placenta behind; and consequently putting it entirely out of the practitioner's power to render any collateral assistance.

Funis some-  
times gives  
way and  
leaves the  
placenta  
behind.

It also happens, not unfrequently, from the general exhaustion of the system, or the local exhaustion and torpitude of the uterus, that no expulsive pains of any kind follow at the ordinary time, or even for a long period

And some-  
times no  
pains to  
separate  
and expel  
the pla-  
centa.

GEN. II.  
SPEC. VII.  
α P. secundaria re-  
tentiva.  
Retention  
of the se-  
cundines.  
Experiment  
as to the  
effect of  
leaving the  
placenta to  
nature.

In this in-  
stance no  
mischief:  
and was  
hence a  
practice  
with many  
at home, as  
it had long  
been  
abroad.

But great  
evil has  
often hap-  
pened,  
and of  
various  
kinds.

Striking  
case in  
illustration.

Patient in  
great  
danger.

afterwards, and consequently that the placenta is still lying unseparated in the uterus.

On a trial instituted by Dr. W. Hunter, and Dr. Sandys in the Middlesex Hospital, it was found in one case, that the placenta left to the action of the uterus alone, was not rejected till twenty-four hours after delivery: and as no ill consequences followed on this experiment, it became soon afterwards a practice with many in this metropolis, as it had long before been with still more on the Continent, to pay no attention to the placenta, and to leave it to take its course. Great mischief however, has been, in many cases found to ensue, from this kind of quietism: for, where there is great exhaustion, a sufficiency of natural exertion does not in numerous instances return for three or four days afterwards, and sometimes even longer: while the placenta, by remaining in the uterus, keeps up a febrile irritation and, what is infinitely worse, by being in many instances partly though not wholly detached, and rendered a dead as well as a foreign substance, the detached part putrifies, and produces a fetor through the whole atmosphere of the chamber sufficient of itself to render the patient sick, and faint, and feverish, if it do not occasion a genuine typhus.

I was lately requested to attend in consultation upon a case of this kind. The patient had had a very difficult labour, and after two or three days of severe suffering was delivered by the use of the crotchet. She was afterwards for a long time in a state of syncope, and the placenta was suffered to remain without any attempt to remove it. She had no expulsive pains for three days, but very great soreness and some degree of laceration in the soft parts, with such a torpitude of the bladder that the water was obliged to be drawn off daily. In about eight and forty hours, she had a hot dry skin, brown furred tongue, with a quick, small pulse, and slight delirium, and occasional shiverings. It was in this state I was requested see her. The room which was small, was insupportable to from its stench, notwithstanding all the pains taken to



maintain cleanliness, and to cover the fœtor by pungent odours. I strenuously advised that the placenta should be instantly removed, but was answered that gangrene had already begun, the patient would certainly die, and as certainly sink under the very attempt to bring it away, so that the operator would fall under the charge of having killed her. My reply was, that she would assuredly die if it were not removed, but I was not so certain that she would if it were; that in my judgement the fœtor rather proceeded from the placenta itself than from the ichorous discharge about the vagina, and gave a token of a very extensive separation, though the patient wanted power to expel it from her body. And I could not avoid adding that if none of the gentlemen present (we made four in all) would venture upon the task I would take the risk upon myself, though I had long declined the practice, and give the patient this only chance of a recovery. This declaration inspirited the rest: the operation was determined upon, the placenta, as I suspected, was found nearly separated throughout, and half advanced into the vagina, and was removed without difficulty. By the use of cinchona and the mineral acids, with a nutritive regimen, the patient gradually recovered, and is now in a state of perfect health.

The modern practice, therefore, of not trusting the placenta to the mere powers of nature, when those powers are exhausted or inoperative, is founded upon a principle of the soundest observation. Four or five hours is the utmost time now usually allowed, and if it be retained beyond this period, the operator interferes, brings it away by the funis, if the uterus will hereby become sufficiently stimulated, and if not, or the funis be broken, by cautiously introducing his hand into the uterus, and peeling the placenta gradually from its walls by the action of his fingers.

If the uterus, instead of contracting at all at its fundus, should contract irregularly and transversely so as to form what has been called an HOUR-GLASS contraction,

GEN. II.  
SPEC. VII.  
α P. secundaria retentiva.  
Retention of the secundines.

The placenta removed, and the patient recovered.

Hence the removal of the placenta not to be left to the power of nature when these are exhausted.  
Time to be allowed before its removal.

Hour-glass contraction of the uterus.



GEN. II.  
SPEC. VII.

6 P. secundaria dolorosa.  
Violent after-pains.

How to be distinguished:  
Treatment.

7 P. secundaria hæmorrhagica.  
Flooding.  
Causes.

Profuse discharge of blood at first without weakening, explained.  
Yet great and dangerous exhaustion afterwards.

the removal of the placenta should take place before this time.

In some irritable habits it is sometimes found on the contrary that AFTER-PAINS, instead of ceasing gradually, continue almost without ceasing, and with nearly as great violence as the pains of labour itself; and this for many hours after the extraction of the placenta.

If such after-pains follow close upon the labour they proceed from a morbid irritation and spasmodic tendency of the uterus alone; and the best remedy is an anodyne liniment applied to the abdomen, with an active dose of laudanum, which last must be repeated as soon as the first dose has lost its effect, the bowels in the mean while being kept regularly open. If such violent pains do not take place till some hours after the evacuation of the placenta, or even the next day, it is highly probable that some large cake of coagulated blood has formed in the uterus, and become a source of irritation. This may often be hooked out by a finger or two introduced for such purpose, and the organ be rendered easy: if not, an opiate will here be as necessary as in the preceding case.

Hæmorrhage or FLOODING after delivery is another evil which the practitioner in the obstetric art is not unfrequently called upon to combat. This is sometimes produced by pulling too forcibly at the umbilical chord, and separating the placenta from the walls of the uterus before its vessels have sufficiently contracted: but the most common cause is an exhausted state of the uterine vessels themselves, and a consequent inability to contract their mouths so that the blood flows through them without resistance.

The uterus is, at this time, so stored with blood of its own, that a prodigious rush will often flow from it without producing syncope or any serious evil upon the general system: for it is only till it has lost its own proper supply, and begins to draw upon the corporeal vessels for a recruit, that any alarming impression is perceived. Yet from the first moment the attendant should be on his

guard, and should have recourse to the means already laid down under flooding occurring in the latter months of pregnancy\*. From the very open state in the present case of the mouths of all the uterine vessels that have anastomosed with the vagina, the flooding is here, however, upon some occasions, far more profuse and dangerous than at any other period, so that a woman has sometimes been carried off in the course of ten minutes, with a sudden faintness, sinking of the pulse, and wildness of the eyes that is most heart-rending. And, in such a situation, as the living powers are failing apace, and must be supported at all adventures, while cold and astringent applications are still applied to the affected region, we must have recourse to the warmest, the most active, and most diffusible cordials, as Madeira wine or brandy itself in an undiluted state: and if we succeed in rousing the frame from its deadly apathy, we must drop them by degrees, or exchange them for food of a rich and nutritive, but less stimulant description.

When the discharge of blood from the uterus ceases, it is succeeded by a fluid of a different appearance which is commonly called LOCHIA (*λόχια*), a term employed by Dioscorides in the sense of *secundæ*, or the materials evacuated by a lying-in woman after the birth of the child. The nature of this discharge does not seem to have been very fully explained by pathologists. The numerous and expanded blood-vessels of the uterus contract gradually, and particularly in their mouths or outlets; by which means the fluid they contain, and which is not entirely evacuated by the vagina, is thrown back on the system with so much moderation as to produce no serious evil, and its stimulus is chiefly directed to the breasts. As the mouths of these vessels progressively collapse, the finer part of the blood only, or at least with not more than a small proportion of the red particles, issues from them, and in smaller abundance, and hence the discharge

GEN. II.  
SPEC. VII.  
γ P. secundaria hæmorrhagica.  
Flooding.  
Treatment.

Patient sometimes dies in a few minutes.

In extreme exhaustion of the living power cordials of the most stimulant kind necessary.

δ P. secundaria lochialis.  
Profuse lochial discharge.  
Origin of the term.  
Nature of the discharge explained.

Its dilute state and change of colour accounted for.

\* Vol. iv. p. 176. Gen. i. Spec. ii. Paracymesis uterina hæmorrhagica; and compare with Vol. ii. pp. 704. 707.

GEN. II.  
SPEC. VII.  
§ P. secundaria lochialis.  
Profuse lochial discharge.

No disturbance while this issues in moderate quantity : but the secretion may be rendered morbid by excess ;

or suppression.

Remedial means.

appears less in quantity and of a more diluted redness. By intermixing with the oxygene of the air which has a free admission to the sexual organs, this red, as in the case of venous blood, assumes a purple or Modena hue : and as this hue becomes blended with the yellowish tinge of the serum, it necessarily changes to greenish which is the colour of the lochial discharge before its cessation.

While this discharge issues in a due proportion to the demand of the idiosyncrasy, for the quantity differs considerably in different women, there is little fever or irritation, and we have no ill consequences to apprehend : but the mouths of these vessels may be irritated by various causes, as catching cold, violent emotions of the mind, the use of too stimulant a diet, or the want of a sympathetic action in the breasts ; and the result, under different circumstances, is of a directly opposite kind. If there be no spasm hereby induced on the mouths of the closing vessels, they will throw forth a morbid superabundance of serous fluid, without running perhaps into a hemorrhage, or opening sufficiently to discharge red blood, and the patient will become greatly exhausted and weakened, have a sense of a prolapse of the uterus, and be peculiarly dispirited in her mind. If, on the contrary, which is more frequently the case, the mouths of the uterine vessels become suddenly and spasmodically closed in consequence of the superinduced irritation, there will be a total and abrupt suppression of the lochia, a sense of great weight and pain will be perceived in the uterus and the whole region of the pubes, a considerable degree of fever will ensue, and the patient will be in danger of a puerperal typhus.

These are the evils which result from a disturbance of the balance of the lochial discharge. In attempting to remedy them the exciting cause should, in the first place, be removed as far as this is capable of being accomplished. After which, in the former case, the strength is to be sustained by unirritant tonics, astringents, and a plain nutritive diet : and in the latter, the spasmodic pain, and heat, and other febrile symptoms are to be subdued

by antispasmodics and relaxants, particularly camphor, with small doses of ipecacuan or antimony. The neutral salts have also in this case proved serviceable, which have the farther advantage of opening and cooling the bowels. It will likewise be found highly useful to foment the abdomen with flannels wrung out in hot water, or, which is far better, to bind a flannel swathe wrung out in hot water in the same manner round the whole of the abdomen and the back, and to encircle it with a band of folded linen to prevent it from wetting the sheets, and to let it remain on like a cataplasm, till it becomes dry by evaporation.

GEN. II.  
SPEC. VII.  
Parodynia  
secundaria.  
Sequential  
labour.  
Treatment.



## GENUS III.

## ECCYESIS.

*Extra-uterine Fetation.*IMPERFECT FETATION IN SOME ORGAN EXTERIOR TO THE  
UTERUS.

GEN. III.  
Physiolo-  
gical ex-  
planation.

WE have shown in the Physiological Proem to the present class that the sexual fluid of the male passes, at the time of the embrace or soon afterwards, into the uterus, and from the uterus into the Fallopian tube, or even the ovarium, where it impregnates an ovulum detached from its proper niche by the force of the orgasmic percussio. It sometimes happens, however, that the Fallopian tubes, or the openings from the uterus leading into them are so impacted with fat or some other material, or so straitened in their diameter that the detached and impregnated ovum is incapable of obtaining a passage into the cavity of the uterus, and is arrested in its course: in which case it must either remain in the tube itself, into which it has thus far proceeded, or drop, at the origin of the fimbriæ, into the hollow of the abdomen. And it has also sometimes occurred that the ovulum or vesicle that has been detached in the ovarium has been incapable of making its way out of the ovarium itself, and has become impregnated in its original seat without a possibility of stirring farther.

In all these cases, the progress of impregnation still goes forward though in an imperfect manner, and with an imperfect developement of organs, and we are hence,

furnished with the three following distinct species of extra-uterine gestation.

GEN. III.  
Eccyesis.  
Extra-uterine  
fetation.

- 1. ECCYESIS OVARIA. OVARIAN EXFETATION.
- 2. ——— TUBALIS. TUBAL EXFETATION.
- 3. ——— ABDOMINALIS. ABDOMINAL EXFETATION.

It is a very remarkable fact, that the uterus still sympathises in every one of these species with the imprisoned and impregnated ovum, in whatever part of the body it may happen to be lodged, produces ordinarily the same efflorescent membrane or decidua, which we have already observed it secretes in the commencement of utero-gestation for the reception of the ovum upon its arrival in the uterus, enlarges its capacity and thickens its walls as though the fetus were really present in its interior; exhibits the same symptoms and excite the same caprices of the stomach as those by which utero-gestation is usually distinguished: and at the expiration of the regular period of nine months, and sometimes, as in ordinary pregnancy, even before this, is attacked with spasmodic or expulsive pains, which often continue for some hours and seldom altogether subside till the organized and extra-uterine substance loses its living power, and becomes of the nature of a foreign material to the organs by which it is surrounded. After which menstruation again returns regularly, as it has hitherto been suspended.

Uterus sympathizes with the growth of the ex-ovum wherever lodged: Decidua is produced. Uterus enlarges: excites the capricious symptoms of genuine pregnancy, and at the close of nine months is attacked with expulsive pains; which subside when the ex-fetus loses its living power. Growth of the ex-ovum.

The extra-uterine ovum, in the mean while, endowed in consequence of its impregnation with a principle of life, continues to grow, whatever be the place of its aberration, in some instances becomes surrounded with an imperfect kind of placenta, developes the general structure of its kind, and exhibits an organized compages of bones, membranes, vessels, viscera, and limbs; the whole figure being more or less perfect according to circumstances that lie beyond our power of penetration.

After the death of the extra-uterine fetus, the uterus, and consequently the general frame, frequently becomes quiet; and the bulky substance, enveloped in a covering of coagulable lymph, remains for years, or perhaps

State of the ex-fetus after death.

GEN. III.  
Eccyesis.  
Extra-  
uterine  
fetation.  
Sometimes  
undisturb-  
ing through  
the whole  
of life.

But some-  
times pro-  
ductive of  
great mis-  
chief in  
various  
ways.

through the whole of life, with no other inconvenience than that of a heavy weight and tumour in the part in which the dead fetus is lodged. But, in many instances, like any other intrusive or foreign material, it produces great irritation, which is succeeded by the ordinary process of ulcerative inflammation, and an opening is hereby made into the intestines, or the vagina, or externally through the integuments of the abdomen, and the indissoluble parts of the fetus are discharged piece-meal; sometimes the patient sinking during the tedious process under the exhaustion of a hectic, but more generally evincing strength enough to sustain the progressive expulsion, and at length restored to the enjoyment of former health.

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## SPECIES I.

### ECCYESIS OVARIA.

#### Ovarian Eccyesis.

#### IMPERFECT FETATION OCCURRING IN THE RIGHT OR LEFT OVARIUM.

The spe-  
cies com-  
mon and  
often very  
distressing.

Illustrated.

THE physiology and general pathology have been already given so much at large in the paragraphs immediately preceding that it is only necessary to observe further that this form of extra-uterine fetation is very common, as well as very distressing. Vater relates a singular case of this kind producing a general intumescence of the abdomen on the right side, the right ovary being the seat of the disease, that continued with little variation through a period of three years and a half with an equal

degree of distress and danger to the patient\*: and other instances are adverted to in the volume of Nosology.

It is in this organ more especially that rudimental attempts at fetal organization, the mere sports of nature, are frequently found produced without impregnation, or any contact with the male sex, and sometimes in very young subjects.

One of the most singular cases of this kind is that communicated by Dr. Baillie to the Royal Society in the year 1788†. The young subject of the case was not more than twelve or thirteen years old, with an infantine uterus and perfect hymen: and the fetation consisted of a suetty substance, hair, and the rudiments of four teeth.

The same kind of formative ludibria are found, also, in mature life in women of the most correct lives, and whose chastity has never been impeached, of which we have an instance in a late volume of the Transactions of the Medico-Chirurgical Society. The subject, an unmarried female, was about thirty years of age, at the time of her death, which took place after a long series of suffering, accompanied with great pain in the region of the bladder, and a considerable swelling of the abdomen. On examining the body, a large tuft of hair of about the size of a hen's egg was found inclosed in a tumour of the left ovarium, surrounded with a fluid of the thickness of cream. In the bladder was traced a similar tuft of hair surrounded with a like fluid which distended and plugged up the organ‡.

Such rudiments of organized form have been resolved by the disciples of Buffon into the peculiar activity of his *molecules organiques*, concerning which we have already spoken in the Physiological Proem to the present class, thronging with a more than ordinary proportion in the region or organ in which the preternatural productions have been found to exist: and by still later physiologists

GEN. III.

SPEC. I.

Eccyesis

ovaria.

Ovarian

exfétation.

Rudimental

attempts

at fetal or-

ganization

sometimes

found in

this organ

without im-

pregnation,

and in very

young

subjects.

Singular

example

in an in-

fant.

Example in

an adult

virgin.

How ex-  
plained by  
the fol-  
lowers of  
Buffon :

by later  
physiolo-  
gists.

\* Dissert. de Graviditate apparente ex tumore ovarii dextrienormi, &c.

† Phil. Trans. 1789.

‡ Vol. ix. p. 427.



GEN. III.  
SPEC. I.  
Eccyesis  
ovaria.  
Ovarian  
Exfetation.

into a salacious temperament in the individuals who have been the subject of them, and who are still further said, as we have also remarked in the same Proem, to have a power when this orgasmic erethism is at its utmost heat as about the period of menstruation, of irritating and even inflaming the ovaria, and occasionally even of detaching one or more ova and putting them into a like state of irregular action. And where cases occur in infants they are ascribed to the same cause operating on a constitution diseased by a morbid precocity\*.

Neither of  
these ex-  
planations  
adequate or  
satisfac-  
tory.

The first of these explanations it is hardly worth while to combat in the present day, and particularly in the present place, after having already illustrated, in the Proem above referred to, the feebleness of its first principles. And with respect to the second it is sufficient to observe that the very same attempts at fetation are sometimes made and carried quite as far towards completion, in organs that cannot be suspected of any salacious sensation, and even in males as well as in females. Thus, Dr. Huxham gives a case in which the rudiments of an embryo were found in a tumour seated near the anus of a child †; and Mr. Young a still more extraordinary one, yet a case well known, I suppose, to nearly all the medical practitioners of this metropolis from personal inspection, of a large protuberant cyst, containing a nucleus of fetal rudiments found in the abdomen of a *male* infant about fifteen months old. The child died after a tedious and painful illness. The body was opened, and the cyst examined: "The substance it contained," says Mr. Young, "had unequivocally the shape and characters of a human fetus:" for a particular description of which the reader must turn to the account itself ‡.

Illustration  
from gene-  
ral princi-  
ples of phy-  
siology.

Upon this subject we can only say that all such abortive attempts are monstrosities; and that monstrosities

\* Vol. IV. *Præotia feminina*, Ord. I. Gen. II, Spec. II, of the present class, p. 115.

† Phil. Trans. Vol. XLV. 1748. p. 325.

‡ Medico. Chir. Trans. Vol. I. p. 241.

are not confined to any particular age as that of fetal life, or to any particular organ. They run occasionally through every part of the frame, and every part of the life, and appear in the form of cysts, and excrescences, and polypi, and ossifications, and a thousand other morbid deviations from the ordinary mark of nature, though they are most frequently found in the first months of impregnation, unquestionably because the excited organs are, at that period, more capable than at any other, of being moulded, by accidental circumstances, into anomalous shapes, and of preserving life under almost every kind of misconstruction and deformity.

In extra-uterine fetation of whatever kind, or wherever situated, the art of medicine can do but little. If the tumour be free from pain, and the general system not essentially disturbed by it, nothing should be attempted whatever. And if, in a case of irritation and ulcerative inflammation, nature herself seem to point out one particular part for the opening of the abscess rather than another, it will almost always be far better merely to watch her footsteps, and assist her intention than to attempt a cure or removal of the cyst in any other way: for we had long ago an opportunity of observing, when treating of INFLAMMATION generally, that, "it is a wise and benevolent law of Providence, and affords an incontrovertible proof of an instinctive remedial power, that inflammation, wherever seated, is always more violent on the side of the inflamed point nearest the surface, and shows a constant tendency to work its way externally rather than internally\*;" or, in other words, in that direction in which the most salutary end can be obtained with the least essential mischief. And, hence, though it may often be found advisable to enlarge an opening made externally by the effort of nature alone, it will generally be injurious to deviate from the spot thus instinctively marked out, and make an opening elsewhere.

GEN. III.  
SPEC. I.  
Eccyesis  
ovaria.  
Ovarian  
Exfetation.

Medicine of  
but little  
avail.

No means  
to be used  
if the tu-  
mour be  
quiet.

In inflam-  
mation the  
course pro-  
posed by  
the reme-  
dial power  
of nature  
to be  
watched,  
and advan-  
tage taken  
of it.

GEN. III.

SPEC. I.

Eccyesis

ovaria.

Ovarian

exfetation.

The cyst

has lain

dormant

for many

years :

and then

become a

source of

irritation

from some

accidental

cause : has

produced

an abscess.

In this case

opens in

different

directions :

as near the

navel,

in the va-

gina or

larger in-

testines.

Exempli-

fied.

Has some-

times been

successfully

removed by

art without

waiting for

any natural

indication.

Illustrated.

The cyst has sometimes laid dormant, or without producing much disturbance, for many years, and then, from some accidental cause, has become irritated, inflamed, and produced a large abscess: the ovarium, in the progress of the inflammation, forming an adhesion to the integuments of the abdomen, and thus at length breaking externally; mostly in the course of the linea alba, often near the navel, but sometimes towards the groin. In a few instances, however, the inflammatory action has travelled in some other direction, and sought some other outlet: so that the ovarium has formed an adhesion with the vagina, or the larger intestines, and ultimately opened into them, and the bones and other indissoluble parts of the fetus have been thrown forth in fragments from the vagina or the anus. Zacutus Lusitanus gives a case in which the bones of an impregnated ovarium were discharged piece-meal by the anus after the impregnation had continued for twelve years\*: and Bartholin another of much longer duration, in which the exit was formed in the hypochondrium after the fetus had been imprisoned for not less than eighteen years.

In a few instances, however, the extra-uterine substance has been removed by art without waiting for the formation of an abscess. A successful operation of this kind is related in the *Histoire de l'Academie Royale*, after a gestation of twenty-seven months, the child being extracted by an incision into the abdomen†. M. Trisen gives a similar example, attended with a like favourable issue‡: and in the *Edinburgh Medical Commentaries* we have an account of the vagina being laid open for the same purpose§.

\* De Praxi admirandâ. Lib. II. Obs. 157.

† Hist. de l'Acad. des Sciences, 1714. p. 29. 1716. p. 32.

‡ Observ. Chirurg. Leid. 1743. 4to.

§ Smith, Vol. v. p. 337.

## SPECIES II.

## ECCYESIS TUBALIS.

**Tubal Ectetation.**IMPERFECT FETATION OCCURRING IN THE FALLOPIAN  
TUBE.

DIEMERBROEK has observed that this is the most common cause under which extra-uterine gestation shows itself\*, and it is at the same time the most dangerous. There is in truth less room for distention here than in any of the other cavities in which the exiled ovum may happen to lodge: and hence the overstretched tube has occasionally bursted, and the patient has soon fallen a sacrifice to the irritation and fever produced by so large a rent: while, if this have not taken place from the mischief done to the tube, it has followed nearly as soon from the morbid excitement and inflammation produced in the abdomen in consequence of the sudden entrance of so large a foreign body into its cavity. Dr. Middleton, however, has described a singular case of a woman who carried a fetus for sixteen years in one of the Fallopian tubes with so little disturbance to the general health of the system that at this period she became pregnant in the regular way, and appears to have passed through her pregnancy with a favourable issue†. The general pathology and mode of treatment run parallel with those of the preceding species.

GEN. III.  
SPEC. II.  
The most common form of ectetation, and the most dangerous.  
Explained.

Singular example.

General treatment.

\* Opera omnia Anatomica, p. 135.

† Phil. Trans. Vol. XLIII, 1744, 1745.



## SPECIES III.

## ECCYESIS ABDOMINALIS.

## Abdominal Ectofetation.

## IMPERFECT FETATION OCCURRING IN THE CAVITY OF THE ABDOMEN.

GEN. III.  
SPEC. III.  
Ex-fetus  
how arrives  
in the ca-  
vity of the  
abdomen :  
when  
dropped by  
abscess  
great  
danger of  
inflamma-  
tion from  
the first.  
When pro-  
duced here  
from an ex-  
ovum little  
or no irri-  
tation.

AN extra-uterine fetus may be deposited in the cavity of the abdomen by bursting through the walls of the ovarium or Fallopian tube after it has been produced there, or by an accidental drop of the impregnated ovum from the extremity or fringe of the tube in its way to the uterus. In the two former instances there is danger of great and fatal inflammation, not less from the rent produced in the organ just quitted by the fetus, than from the irritation which so large a foreign body cannot fail to produce on the organs on which it presses. In the last instance, on the contrary, the substance, on its first entrance, is so minute, and its growth so gradual, that the contiguous organs suffer little or no irritation except from some accidental excitement, till at length, indeed, the magnitude of the fetus may alone be a sufficient cause of morbid action, and lay a foundation for the most serious consequences.

Even in  
this species  
the uterus  
sympathises  
and runs  
through the  
whole train  
of pregnant  
symptoms.

In the introductory remarks to the present genus, we observed, that, in almost all cases of extra-uterine fetation, the moment the ovum becomes impregnated the womb regularly sympathizes in the action, produces a tunica decidua, enlarges, ceases to menstruate, mimics the entire process of utero-gestation, and, at the expira-

tion of nine months, is attacked with regular labour pains. After these have continued for some hours they gradually cease: and, what is still more remarkable, the ex-fetus, which, till this moment, is endowed with life, and continues to grow, how imperfect soever its form, dies as though strangled in its imprisonment; and by becoming a dead substance, becomes, at the same time, a substance obnoxious to the living organs around it, which have hitherto suffered little inconvenience from its proximity; often excites irritation and an abscess, and from such abscess, as we have already observed, is thrown forth piece-meal.

GEN. III.  
SPEC. III.  
Eccyesis  
abdomi-  
nalis.  
Abdominal  
exfetation.

The following history, which is highly curious in itself, forms a striking illustration of the whole of these remarks. It is published by Dr. Bell of Dublin, from a full knowledge of the entire facts: A young woman, aged twenty-one, after being married fifteen months had the usual signs of pregnancy, and at the expiration of her reckoning was attacked with regular labour pains which were very violent for some days, when they gradually left her. But the abdomen still continued to enlarge, while the strength of the patient as gradually failed, and she was reduced to the utmost state of emaciation. Eight or nine months from the cessation of her labour-pains she discharged a considerable quantity of fluid from a small aperture at the navel, along with which were perceived some fleshy fibres and pieces of bone. It was proposed to follow up this indication of nature, and make an opening into the abdomen at this very point, large enough to remove the fetus supposed to be lodged there. This was accomplished by an incision running two inches above and the same length below the navel, when the bones of two full grown fetuses were extracted, for little beside bones at that time remained. No hemorrhage ensued, and the patient recovered her health so speedily as to be able to menstruate in about three months. After three months more she was prevailed upon again to cohabit

Singular  
case in  
illustration  
from Bell  
of Dublin.

GEN. III.  
SPEC. III.  
Eccyesis  
abdomi-  
nalis.  
Abdominal  
exfetation.  
Case ex-  
plained.

with her husband, became pregnant, had a natural labour, and bore several children in succession \*.

In this case it is clear that the sensations of the uterus during the developement of the twin ex-fetuses, were those of mere sympathy; as it is also that they ceased to grow, and became dead and irritating substances after the common term of utero-gestation, or on the cessation of the labour-pains.

Inflamma-  
tion pro-  
duced not  
always thus  
violent :  
but only  
sufficient to  
form a se-  
cretion and  
layer of  
coagulable  
lymph  
which be-  
comes a  
nidus to  
the fetus,  
and pro-  
tects the  
adjoining  
parts from  
irritation.

This is the usual course, but in some cases the irritation the dead substance excites is less violent, and, instead of an ulcerative, an adhesive inflammation is produced, and coagulable lymph is thrown forth, which, by the law of nature, is gradually transformed into a soft and membranous material that becomes a sheath or nidus for the dead fetus, and prevents it from exciting any further irritation. And in this manner an abdominal ex-fetus has sometimes been borne for a considerable number of years, or even to the end of life, without any serious mischief. In the volume of Nosology I have referred to various proofs of its having, in this way lain quiet for twenty two, twenty six, and even forty six years.

Hence pu-  
trefaction  
does not  
take place  
but a  
change of  
another  
kind is  
often found  
varied by  
circum-  
stances.  
as a con-  
version into  
adipocire or  
suet,

Putrefaction, under these circumstances, does not take place, for the imbedded substance is shut out from the chief auxiliary to putrefaction, which is air: but a change of some other kind is generally found to prevail, though with some diversity, according to the accidental circumstances that accompany it. And hence the fetus, on opening the cyst, after the death of the mother, or on its own extraction antecedently, has been found sometimes converted into adipocire, or a suetty or cetaceous material †, making a near approach to it; sometimes into a leathery or cartilaginous structure ‡; and sometimes

\* History of a case in which two Fetuses that had been carried near twenty-one months, were successfully extracted from the abdomen by incision, &c.

† Wagner, Nov. Act. Liter. Maris. Balth. 1699.

‡ Phil. Trans. Various examples, passim.

into an osseous or almost stony mass, which has been distinguished by the name of *OSTEOPÆDION* or *LITHOPÆDION* \*.

Under these circumstances, also, the bulk and weight of the fetus has considerably varied; for, the fluids having evaporated, it has often been found light and shrivelled, yet, when loaded with osseous matter, it has been peculiarly heavy. In a structure of somewhat more than ordinary completion Krohn found the weight amount to four pounds and a half.

For medical treatment there is little scope, and this little has been already touched upon under the first species †.

GEN. III.  
SPEC. III.

Eccyesis  
abdomi-  
nalis.

Abdominal  
exfetation.

Osteo-  
pædion  
what?

Litho-  
pædion  
what?

Bulk and  
weight of  
the fetus  
greatly al-  
tered by  
such  
changes.

\* Abhandl. der Josephin. Acad. Band. 1.

Eyson, Diss. de Fætû lapidescente. Groning. 1661.

† Fætûs extra uterum historia. Lond. 1791. Gött. Ann. 1791.



## GENUS IV.

## PSEUDOCYESIS.

*False Conception.*

SYMPTOMS OF PREGNANCY WITHOUT IMPREGNATION:  
CHIEFLY OCCURRING ON THE CESSATION OF THE CATAMENIA.

GEN. IV.  
Comparison  
of the  
preceding  
with the  
present  
species.

Train of  
feelings and  
action ex-  
cited in the  
uterus from  
the force of  
habit in  
both  
species.

But in the  
present  
species in  
conse-  
quence of  
uterine irri-  
tability  
alone with-  
out any  
fetal for-  
mation  
whether  
uterine or  
extra-  
uterine.

IN the preceding genus we beheld the uterus excited to action, and mimicking the progress of pregnancy though without any pretensions to it in consequence of its association with some extra-uterine impregnation. In the present genus there is no proper impregnation any where, but a mere irritation derived from the lodgement of some morbid and unorganised substance, which excites a train of feelings, and not unfrequently a change of action, easily recalled from the force of habit. It is on this last account that virgins are rarely, if ever, liable to this affection. Such at least is the general opinion, which appears to be well founded; "And no case," says Mr. Burns, "that I have met with contradicts the supposition."

This train of feeling and change of action seem also, at times, excited by a peculiar kind of irritability of the uterus itself, even where there is no substance whatever in its own or any other cavity that can become a stimulus: and we are hence put into possession of the two following distinct species:

- |                          |                   |
|--------------------------|-------------------|
| 1. PSEUDOCYESIS MOLARIS. | MOLE.             |
| 2. ————— INANIS.         | FALSE CONCEPTION. |

## SPECIES I.

## PSEUDOCYESIS MOLARIS.

**Mole.**

THE UTERUS IRRITATED BY A COAGULUM OF BLOOD OR OTHER SECRETION LODGED IN ITS CAVITY, OFTEN ASSUMING A FIBROUS APPEARANCE.

A COAGULUM of blood thrown into the womb by a relaxation of the mouth of the menstrual excernents, or remaining there as a sequel of miscarriage or labour, is perhaps the most common cause of this morbid action and sensation. It was long ago thus explained by Mr. Hewson—"from the blood's being without motion in the cavity of the uterus;" and consequently coagulating: "and hence," continues he, "the origin of those large clots which sometimes come from the cavity: and which, when more condensed by the oozing out of the serum, and of the red globules, assume a flesh-like appearance, and have been called moles\*." The concretion, indeed, has become sometimes so close and indurated as to resemble the consolidation of a stone; and hence Mr. Bromfield describes a mole expelled from the uterus as consisting of a stony mass of the size of a child's head†. And Hancroft has related a similar case‡.

Living blood, however, has a strong tendency at all times, and especially when aided by rest and the warmth of the body, to fabricate vessels and assume a membranous structure. "I have reason to believe," says Mr. J.

GEN. IV.

SPEC. I.

Most common cause  
a coagulum  
of blood.

as asserted  
by Hewson.

This sometimes  
greatly  
altered in  
its form  
and ordinary  
proportion.  
Occasionally  
hard like stone.

Sometimes  
assumes a  
fibrous or  
other organized  
structure.

\* Inquiries, &c. Part I. p. 27.

† Observ. II. p. 156.

‡ Diss de Mola, occasione molaæ osseæ in vetula inventa. Gœt. 1746.

GEN. IV.  
SPEC. I.  
Pseudo-  
cystis  
molaris.  
Mole.  
Explained.

Hunter, "that the coagulum has the power under necessary circumstances, to form vessels in and of itself: for although not organic, it is still of a peculiar form, structure or arrangement. I think I have been able to inject what I suspected to be the beginning of a vascular formation in a coagulum when it could not derive any vessels from the surrounding parts\*." It is probably on this account that we sometimes find the discharged mass or mole evincing something of a fibrous or membranous appearance, and mimicking the structure of an organized substance.

Fragments  
of placenta  
sometimes  
a cause:

and hence  
the mole of  
a still more  
complicated  
make.

Fragments of a placenta, or of its membranes have also sometimes remained unexpelled from the uterus, and have become blended with coagula of blood†, and probably of blood aiming, as above, at a vascular development, and hence the mole has been of a still more complicated character, and has often puzzled practitioners of great judgement and experience.

Hydatids  
have frequently  
lodged in the  
sulci:  
and swollen  
the mass to  
an enormous  
size.

And occasionally hydatids have found the means of forming a nidus in some one of the sulci of the womb, and, by swelling into a considerable tumour or various clusters of tumours, have very considerably added to the enlargement‡.

Where fragments  
of an uterine  
fetus are  
found, not  
properly  
called a  
mole:

such being  
rather miscarriages,  
or remnants  
of miscarriages  
lying for a long  
time un-  
expelled,

Many writers have described, by the name of moles, the fragments of a fetus, which have long remained in the uterus after its death, and have sometimes been surrounded with an adscititious involucre, or some part of its placenta or membranes, but so changed by some subsequent chemical or animal operation, as to have little resemblance to their original structure. These, however, are rather miscarriages, or remnants of miscarriages, than moles. They manifestly bespeak an impregnation and organic growth in the proper organ, but, owing to torpitude or some other diseased condition of the womb,

\* On Blood, &c. p. 92. 4to. Edit. 1794.

† Ruysch, Thesaurus, III. vii.

‡ Eph. Nat. Cur. Dec. II. Ann. II. 157. Ann. VIII. 50. et alibi.

Morgagni, De Sed. et Caus. Morb. Ep. XLVIII. 13, &c.

were not expelled at the period of the death of the fetus. We have already observed, in treating of miscarriage, PARACYESIS ABORTUS, and more particularly still under PARACYESIS PLURALIS, that such retention, and almost to an unlimited period, is by no means uncommon, and have illustrated the remark by numerous examples.

Simulating pregnancy, from molar concretions, assumes in many cases so much of the character of genuine impregnation as to be distinguished with considerable difficulty. In general, however, the abdominal swelling increases in the spurious kind far more rapidly than in the real for the first three months; after which it keeps nearly at a stand: the tumour, moreover, is considerably more equable, the breasts are flat and do not participate in the action, and there is no sense of quickening. There is almost always a retention of the menses.

If we suspect the disease, the state of the uterus should be examined, and it will often be in the examiner's power to ascertain the fact, and by a skilful introduction of the finger to hook down a part of the mass through the cervix, and hence, by a little dexterity, to remove the whole; but he should be careful not to break the mole into fragments.

Moles, wholly or in fractions, are thrown out by the action of the uterus at different periods: often at three months; more frequently by something like a regular accession of labour-pains, at nine: but they occasionally remain much longer: in a case of Riedlin's, for three years\*; and in one described by Zuingen for not less than seventeen†.

GEN. IV.  
SPEC. I.  
Pseudo-  
cyesis  
molaris.  
Mole.

as already  
explained.

Stimulating  
pregnancy  
from molar  
concretions  
often mis-  
taken for  
utero-ges-  
tation.

Distinctive  
characters.

The state of  
the uterus  
to be ex-  
amined:  
by which  
the con-  
cretion may  
often be  
removed.

Moles  
wholly or in  
fractions  
discharged  
at different  
periods:  
but often  
retained for  
many  
years.

\* Lin. Med. 1695. p. 297.

† Theatrum vitæ humanæ, p. 331, 357.



## SPECIES II.

## PSEUDOCYESIS INANIS.

*False Conception.*

GEN. IV.

SPEC. II.

Womb

most irritable in its earliest and in its latest power of action:

and hence towards the close of menstruation sometimes reassumes the feelings of pregnancy it has formerly sustained, and goes through the entire train of symptoms.

This illusory feeling dies away gradually, sometimes at three months, but sometimes not till nine, when there is a feeble attempt at labour pains.

How distinguished from genuine pregnancy.

THE UTERUS VOID OF INTERNAL SUBSTANCE; AND IRRITATED BY SOME UNKNOWN MORBID ACTION.

THERE are two periods during the active power of the womb in which it is peculiarly irritable; and these are at the commencement, and at the final termination of the catamenial flux. And hence it sometimes happens at the last period, from some unknown excitement, though generally, perhaps, the increased erethism, which, in consequence of such irritation, accompanies the conjugal embrace, that it becomes sensible of feelings and communicates them to the stomach, not unlike what it has formerly sustained in an early stage of impregnation; and, a catenation of actions having thus commenced, every link in the chain that accompanied the whole range of former pregnancies, is passed through and as accurately imitated as if there were a real foundation for it.

This illusory feeling, however, sometimes dies away gradually at the end of three months, but more usually runs on to the end of the ninth, when there is occasionally a feeble attempt at labour-pains, but they come to nothing: and the farce is gradually, and in a few instances suddenly concluded by a rapid diminution of the abdominal swelling, and a return of the uterus to its proper size.

The distinctive signs which indicate real from spurious pregnancy under the last species, and which we have already noticed, are equally applicable to the present, and the practitioner should avail himself of them.

**CLASS VI.**

CLASS VI.

ECCRITICA.

DISEASES OF THE EXCERNENT FUNCTION.

ORDER I.

MESOTICA.

AFFECTING THE PARENCHYMA.

II.

CATOTICA.

AFFECTING INTERNAL SURFACES.

III.

ACROTICA.

AFFECTING THE EXTERNAL SURFACE.

## CLASS VI.

### PHYSIOLOGICAL PROEM.

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THE structure of the solid parts of the body consists of three distinct substances—a fibrous, a parenchymatous, and a cellular or web-like. The fibrous is chiefly to be traced in the bony, muscular, and membranous parts; the parenchyma, a term first employed by Erasistratus, and, as we shall show hereafter, in a very different sense from that in which it is used at present, in what are commonly called visceral organs; and the cellular in both. The cellular, is in truth as it was first denominated by Bordeu, a mucous web\*; and, while it serves the purpose of giving support to the vessels and nerves of the fibrous parts, of separating them from each other where necessary, and where necessary of connecting them; it is the repository or receptacle of the gelatinous material, which constitutes the general substance of the parenchymatous parts, and has peculiar qualities superadded to it according to the nature of the organ which it embodies, and the peculiarity of the texture which runs through it:—whence the structure of the liver differs from that of the pancreas, the structure of the pancreas from that of the kidneys: and the structure of the lungs, or of the placenta, from all the rest.

CLASS VI.  
Solid parts  
composed  
of three  
substances.  
Fibrous:  
parenchy-  
matous:  
cellular.

The last  
called  
mucous-  
web.

Its use.

---

\* Recherches sur le Tissu muqueux ou organe cellulaire. Paris, 1767.



CLASS VI.  
All these  
parts wear  
out by their  
own use and  
are supplied  
from the  
blood.

Hence two  
distinct sets  
of vessels:  
as secretor-  
ies and  
absorbents.

Related to  
each other  
as arteries  
to veins:

and fulfil  
the ecce-riti-  
cal or ex-  
cernent  
function.

Refuse  
matter not  
all wasted.  
Eliminated  
matter of  
two sorts:  
one capable  
of being  
restored to  
use: the  
other alto-  
gether  
incapable  
of revival.  
Absorbent  
system  
takes the  
charge of  
the first:

All these parts are perpetually wearing out by their own action—the most firm and solid as well as the most spongy and attenuate. They are supplied with new materials from the general current of the blood, and have their waste and recrement carried off by a correspondent process.

It is obvious that, for this purpose, there must be two distinct sets or systems of vessels: one by which the due recruit is provided, and the other by which the refuse or rejected part is removed. These vessels are, in common language, denominated SECRETORIES and ABSORBENTS. They bear the same relation to each other as the arteries and veins: the action which commences with the former is carried forward into the latter: and we may further observe that while the secretories originate from the arteries, the absorbents terminate in the veins. The general function sustained by these two sets or systems of vessels is, in the present work, denominated ECCRITICAL or EXCERNENT: the health of this function consists in the balance of power maintained between their respective vessels: and its diseases in the disturbance of such balance. There may be undue secretion with healthy absorption; undue absorption with healthy secretion: or there may be undue or morbid absorption and secretion at the same time.

The refuse matter, however, or that which is no longer fit for use, is not all wasted: nor in reality any of that which falls within the province of the absorbents. Nature is a judicious economist, and divides the eliminated materials into two parts—one consisting of those fluids which, by an intimate union with the newly formed chyle, and a fresh subaction in the lungs, may once more be adapted for the purposes of general circulation; and the other of those which no elaboration can revive, and whose longer retention in the body would be mischievous. It is the province of the absorbent system to take the charge of the whole of the first office; to collect the effete matter from every quarter, and to pour it, by means of innumerable channels that are perpetually uniting, into the thoracic

duct, which forwards it progressively to the heart. The really waste and intractable matter, instead of disturbing the action of the absorbents, is at once thrown out of the general system by the mouths of the secernents themselves, as in the case of insensible perspiration; or, where such a perpetual efflux would be inconvenient, is deposited in separate reservoirs, and suffered to accumulate, till the individual has a commodious opportunity of evacuating them, as in the case of the urine and the feces.

CLASS VI.  
the second  
is thrown  
out from  
the system.

Thus far we see into the general economy: but when we come to examine minutely into the nature of either of these sets of vessels, we find that there is much yet to be learned both as to their structure, and the means by which they operate. The subject is of great importance, and may, perhaps, be best considered under the three following divisions:

- I. THE GENERAL NATURE OF THE SECERNENT SYSTEM.
- II. THE GENERAL NATURE OF THE ABSORBENT SYSTEM.
- III. THE GENERAL EFFECTS PRODUCED BY THE ACTION OF THESE TWO SYSTEMS ON EACH OTHER.

I. It was at one time the common doctrine among physiologists, as well chemical as mechanical, that all the vast variety of animal productions which are traced in the different secretory organs, whether wax, or tears, or milk, or bile, or saliva, were formerly contained in the circulating mass; and that the only office of these organs was to *separate* them respectively from the other materials that entered into the very complex crasis of the blood; whence, indeed, the name of SECERNENTS or SECRETORIES, which mean nothing more than *separating powers*. This action was by the chemists supposed to depend on peculiar attractions, or the play of affinities which was the explanation advanced by some; or on peculiar ferments, conveyed by the blood to the secernent organ, or pre-existing in it, which was the opinion of others. The mechanical physiologists, on the contrary, ascribed the separation to the peculiar figure or diameter of the secretory vessels, which, by their make,

I. Secernent system, All secreted matters formerly supposed to be contained in the circulating mass:

and separated by peculiar attractions, or peculiar ferments: or the peculiar figure of the respective vessels.

CLASS VI.  
I. Secern-  
ent system.

were only fitted to receive particles of a given form, as prisms where the vessels were triangular, and cubes where they were square. Such was the explanation of Des Cartes : while Boerhaave, not essentially wandering from the same view, supposed the more attenuate secretions to depend upon vessels of a finer bore, and the more viscid upon those of a larger diameter.

This hypo-  
thesis dis-  
proved by  
modern  
chemistry :  
and the  
secretive  
fluids shown  
to be pro-  
duced by  
recomposi-  
tion.  
Fabric of  
the secern-  
ing organs :

simple ca-  
pillaries :  
vessels with  
the append-  
age of a  
follicle ;  
and glands.

Glands  
seem to  
afford  
nothing  
more than  
the means  
of accumu-  
lation :  
evidenced  
in the liver :

Modern chemistry, however, has completely exploded all these and many other hypotheses founded upon the same common principle, by proving that most of the secerned materials are not formally existent in the blood, and, consequently, that it is not, strictly speaking, by an act of separation, but of new arrangement or recomposition that they produced out of its elements. And hence, physiologists have been led to a critical inquiry into the fabric of the secerning organ, but hitherto without much satisfaction. In its simplest state it seems, as far as it can be traced, to consist of nothing more than single vessels possessing a capillary orifice, as in the Schneide-rian membrane. In a somewhat more compound form we find this orifice opening into a follicle, or minute cavity of an elliptic shape; and, in a still more complicated make, we meet with a glandular apparatus more or less glomerate, consisting of a congeries of secernent vessels, with or without follicles, and occasionally accompanied with a basin or reservoir for a safe deposit of the secreted or elaborated matter against the time of its being wanted, of which the gall-bladder furnishes us with a well-known example. But in none of these instances are we able to discover any peculiar effect produced by this complication of machinery beyond that of affording the means of accumulation : for large as is the organ of the liver it is in the penicilli, or the pori biliarii alone that the bile is formed and completely elaborated : the liver is a vast bundle or combination of these, and hence affords an opportunity for a free formation of bile in a collective state, but it has not been ascertained that it affords any thing more. And although in the gall-bladder we find this fluid a little varied after its deposite, and rendered

thicker, yellower, and bitterer, the change is nothing more than what must necessarily follow from absorption, or the removal of a part of the finer particles of the bile. The conglomerate glands of the mammæ offer us the same results, for the milk here secreted is as perfect milk in every separate lactiferous tube, as when it flows in an accumulated form from the nipple. And hence, follicles themselves may be nothing more than minute reservoirs for the convenient accumulation of such fluids as are deposited in them till they are required for use. Mucus and sebum are inspissated by retention, but they rarely undergo any other change. We are obliged, therefore, to conclude with Sir Everard Home, that “the organs of secretion are principally made up of arteries and veins; but there is nothing in the different modes in which these vessels ramify that can in any way account for the changes in the blood, out of which secretions arise\*.”

These organs, however, are largely supplied with twigs of small nerves, and it has been an idea long entertained by physiologists that secretion is chiefly effected through their instrumentality. Sir Everard Home, in his paper inserted in the volume of the Philosophical Transactions just referred to, has “observed that in fishes which are capable of secreting the electric fluid the nerves connected with the electrical organs exceed those that go to all the other parts of the fish, in the proportion of twenty to one†:” and in confirmation of this view of the subject, it may be remarked that there are no parts of the body more manifestly affected, and few so much so, as the secretory organs, by mental emotion. The whole surface of the skin is sometimes bedewed with drops of sweat and even of blood by a sudden paroxysm of agony of mind; grief fills the eyes with tears: fear is well known to be a powerful stimulant to the kidneys, and very generally to the alvine canal; anger gives an additional flow,

CLASS VI.  
1. Secern-  
ent system.

and in the  
breasts.

Secretion  
how far pro-  
duced by a  
nervous  
power.

Electrical  
organ of  
gymnotus  
electricus,  
applied to  
this inquiry.

Secretions  
effected by  
mental  
emotions.

\* Phil. Trans. 1809, p. 387.

† Id. p. 386.



CLASS VI.  
I. Secern-  
ent system.

perhaps an additional acrimony, to the bile; and, if urged to violence, renders the saliva poisonous, as we have already observed under the genus *LYSSA* \*: and disappointed hope destroys the digestion, and turns the secreted fluids of the stomach acid.

Objections  
to this con-  
jecture.

All this should seem to prove that the secretory organs are chiefly influenced by the sensorial system; yet Haller has long ago observed that the larger branches of the nerves seldom enter into them, and seem purposely to avoid them†: the secernent glands have little sensibility; and the secretions of plants, which have no nervous system, are as abundant, and diversified, and as wonderful in every respect, as those of animals.

The means, therefore, by which the very extensive and important economy of secretion are effected, seem hitherto, in a very considerable degree, to have eluded all investigation. We behold, nevertheless, the important work proceeding before us, and are in some degree acquainted with its machinery.

The sim-  
plest and  
most copi-  
ous secre-  
tion, the  
halitus of  
internal  
surfaces.

The most simple, and at the same time, perhaps, the most copious of the fluids, which are in this manner separated from the blood, is that discharged by very minute secernent vessels, supposed to be terminal or exhalant arteries, which open into all the cavities of the body, and pour forth a fine, breathing vapour, or halitus, as it is called, which keeps their surfaces moist, and makes motion easy—an effluvium which must have been noticed by every one who has ever attended the cutting up of a bullock in a slaughter-house. We have formerly had occasion to observe that arteries terminate in two ways—in minute veins—and in exhalant vessels. The former termination can often be followed up by injections and occasionally traced by the microscope; but no microscopic experiment has hitherto enabled the anatomist to discover the orifices of the exhalant branches of arteries. Their existence, however, is proved, as Mr. Cruikshank

The mouths  
of the  
vessels pro-  
ducing this,  
never yet  
discovered.

Their ex-  
istence and  
connexion  
with the  
arterial  
system how  
proved.

\* Vol. III. p. 544.

† Physiolog. Tom. IX. passim.

has observed, by their sometimes, and especially when enlarged in diameter or acted upon by a more than ordinary vis à tergo, pouring forth blood instead of vapour, of which we have a striking instance in bloody sweat; as also in the menstrual flux, which though not blood itself, proceeds, as Dr. Hunter has sufficiently shown, from the mouths of the exhalant arteries of the uterus, periodically altered in their diameter and secernent power.

CLASS VI.  
I. Secernent system.

II. The fluid thus thrown forth to lubricate internal surfaces, would necessarily accumulate and become inconvenient, if there were not a correspondent set of vessels perpetually at work to carry off the surplus. But such a set of vessels is every where distributed over the entire range of the body, as well within as without, to answer this express purpose: and they are hence called ABSORBENTS; and, from the limpidity of their contained fluid, LYMPHATICS.

II. Absorbent system.

Their course has been progressively followed up and developed from the time of Asellius \*, who, in the year 1622, “reaped the first laurels in this field by his discovery of those vessels on the mesentery which, from their carrying a milk-white fluid, he denominated lacteals †,” and whose researches were confirmed and extended by the valuable labours of Pecquet, Rudbeck, Jollyffe, Bartholine, Glisson, Nuck, and Ruysch, till by the concurrent and finishing demonstrations of Hoffman and Mekel, and more especially of our own illustrious countrymen Hewson, the elder Monro, both the Hunters, and Cruikshank, the whole of this curious and elaborate economy was completely explained and illustrated towards the close of the preceding century, and the opposition of Baron Haller was abandoned.

The course of these sufficiently ascertained and demonstrated.

The vessels of the absorbent system anastomose more frequently than either the veins or the arteries; for it is a general law of nature that the smaller the vessels of every kind, the more freely they communicate and unite

Absorbents anastomose more frequently than any other vessels, and why.

\* Epistola ad Haller.

† Hewson, Of the Lymphatic System, p. 2.

CLASS VI.  
II. Absorbent system.

All terminate in the thoracic duct, whence their contents are conveyed to the heart.

Hereby a prodigious saving of animalized fluids.

Many of the secretions thus thrown into the circulation contribute to invigorate the frame.

Illustrated.

with each other. We can no more trace their orifices, excepting, indeed, those of the lacteals, than we can the orifices of the exhalants; but we can trace their united branches from an early function, and can follow them up singly, or in the confederated form of conglomerate glands, till, with the exception of a few that enter the right subclavian vein, they all terminate in the common trunk of the thoracic duct; which, as we have formerly observed, receives also the tributary stream of the anastomosing lacteals, or the absorbents which drink up the subacted food from the alvine canal, whose orifices are capable of being traced—and pours the whole of this complicated fluid, steadily and slowly by means of a valve placed for this purpose at its opening, into the subclavian vein of the left side.

By this contrivance there is a prodigious saving of animalized fluids, which, however they may differ from each other in several properties, are far more easily reducible to genuine blood, than new and unassimilated matter obtained from without.

Yet, this is not all: for many of the secretions, whose surplus is thus thrown back upon the system, essentially contribute to its greater vigour and perfection. We have a striking example of this in absorbed semen, which, as observed on a late occasion \*, gives force and firmness to the voice, and changes the downy hair of the cheeks into a bristly beard: insomuch that those who are castrated in early life are uniformly deprived of these peculiar features of manhood. The absorption of the surplus matter secreted by the ovaria at the same age of puberty produces an equal influence upon the mammary glands, and finishes the character of the female sex, as the preceding absorption completes that of the male. So, absorption of fat from the colon, where, in the opinion of Sir Everard Home, it is formed in great abundance, carries on the growth of the body in youth †.

\* Vol. iv, p. 13. Phys. Proem. *suprà*.

† Vol. i. p. 19 of the present work, as also Phil. Trans. 1813, p. 157.

Absorbents accompany every part of the general frame so closely, and with so much minuteness of structure, that Mr. Cruikshank has proved them to exist very numerous in the coats of small arteries and veins, and suspects them to be attendants on the vasa vasorum, and equally to enter into their fabric. Wherever they exist they are peculiarly distinguished by their very numerous valves, with which they are enriched far more than any other sets of vessels whatever. "A lymphatic valve is a semicircular membrane, or rather of a parabolic shape, attached to the inside of the lymphatic vessels by its circular edge, having its straight edge, corresponding to the diameter, loose or floating in the cavity: in consequence of this contrivance fluids passing in one direction make the valve lie close to the side of the vessel, and leave the passage free; but attempting to pass in the opposite direction, raise the valve from the side of the vessel, and push its loose edge towards the centre of the cavity. But, as this would shut up little more than one half of the cavity, the valves are disposed in pairs exactly opposite to each other, by which means the whole cavity is accurately closed \*."

The distance at which the pairs of valves lie varies exceedingly. The intervals are often equal and measure an eighth or a sixteenth part of an inch. Yet the interval is at times much greater. "I have seen a lymphatic vessel," says Mr. Cruikshank, "run six inches without a single valve appearing in its cavity. Sometimes the trunks are more crowded with valves than the branches, and sometimes I have seen the reverse of this †."

In the absorbents, also, we meet with glands; their form is mostly oval, one end being turned to the thoracic duct and the other from it: but we are in the same kind of uncertainty concerning their use, and, in some measure, concerning their organization, as in respect to those of

CLASS VI.  
II. Absorbent system.  
Absorbents accompany every part of the frame, and enter into the coats of the minutest vessels.  
Possess very numerous valves.

Valves vary in number and distance both in the trunks and minutest branches.

Glands of the absorbent system what?

\* Cruikshank, Anat. of Absorb. Vessels; p. 66. 2d. Edit.

† Loc. citat.



CLASS VI.  
II. Absorb-  
ent system.  
Vas infe-  
rens what?  
Vas effe-  
rens what?

Glands  
whether  
convolu-  
tions of  
vasa infe-  
rentia or a  
congeries of  
distinct  
cells.

Probably  
auxiliary  
to the  
valves in  
abating the  
back force  
of the fluids,  
and answer  
the purpose  
of recepta-  
cles.

Propulsive  
power un-  
known.

Their sen-  
sibility  
small, and  
rarely sup-  
plied with  
branches  
from the  
larger  
nerves.  
Proofs of  
an absorb-  
ent power.

the secernent system. The vessel that conveys a fluid to one of these glands is called a *vas inferens*, and that which conveys it away a *vas efferens*. The vasa inferentia, or those that enter a gland, are sometimes numerous; they have been detected as amounting to fifteen or twenty; and are sometimes thrice or oftener as many. They are always, however, more numerous than the vasa efferentia, or those which carry on the fluid towards the thoracic duct. The last are consequently, for the most part, of a larger diameter, and sometimes consist of a single vessel alone. It is conceived by many physiologists that the conglobate mass which forms the gland consists of nothing more than convolutions of the vasa inferentia; whilst others as strenuously contend that they are a congeries of cells or acini totally distinct from the absorbent vessels that enter into them. Whatever their structure may be, they seem to the present author to be powerfully auxiliary to the valves by abating the back force they are unquestionably called at times to encounter from some morbid action, and there is reason to believe that in this way, like the conglomerate glands of the secernents, they become basins or receptacles.

As in the case of the secernents, we are also unacquainted with the means by which the absorbents act. This, in both instances, is said to be a *vis a tergo*,—a term which gives us little information in either instance, and is peculiarly difficult of comprehension in the latter. In their most composite state they possess a very low degree of sensibility, and are but little supplied with branches from the larger trunks of nerves.

Abstruse, however, as the process of absorption is to us at present, we have sufficient proofs of the fact. Of six pints of warm water injected into the abdomen of a living dog not more than four ounces remained at the expiration of six hours. The water accumulated in dropsy of the brain, and deposited in the ventricles, we have every reason to believe is often absorbed from the cavities; for the symptoms of the disease have been sometimes marked, and after having made their appear-

ance, and been skilfully followed up by remedies, have entirely vanished: and the water in dropsy of the chest, and even at times, in ascites, has been as effectually removed.

It has been doubted by some physiologists whether there be any absorbent vessels that open on the surface of the body: yet a multitude of facts seem sufficiently to establish the positive side of this question, though it is not fluids of every kind that can be carried from the skin into the circulating system, and hence their power is by no means universal. Sailors who, when in great thirst, put on shirts wetted with salt water, find considerable relief to this distressing sensation. Dr. Simpson, of St. Andrews, relates the case of a rapid decrease of the water in which the legs of a phrenitic patient were bathed: and De Haen finding that his dropsical patients filled equally fast whether they were permitted to drink liquids or not, did not hesitate to assert that they must absorb from the atmosphere. Spirits and many volatile irritants seem to be absorbed more rapidly than water, and there can be no doubt that warmth and friction are two of the means by which the power of absorption is augmented. "A patient of mine," says Mr. Cruikshank, "with a stricture in the esophagus, received nothing, either solid or liquid, into the stomach for two months: he was exceedingly thirsty, and complained of making no water. I ordered him the warm-bath for an hour, morning and evening, for a month: his thirst vanished, and he made water in the same manner as when he used to drink by the mouth, and when the fluid descended readily into the stomach\*." The aliment of nutritive clysters seems, in like manner, to be often received into the system, and it is said, though upon more questionable grounds, that cinchona, in decoction, has also been absorbed both from the intestines and the skin.

CLASS VI.  
II. Absorb-  
ent system.

Whether  
any absorb-  
ents on the  
surface of  
the body

appear to  
exist but  
not capa-  
ble of im-  
bibing  
fluids of all  
kinds.

Proofs of  
their ex-  
istence and  
power.

\* Anat. of the Absorb. Vessels, p. 108.

CLASS VI.  
II. Absorb-  
ent system.

Narcotic  
fluids spar-  
ingly or  
rarely ab-  
sorbed :

as also few  
poisonous  
liquids.

Absorption  
supposed  
by the an-  
cients to be  
performed  
by the arte-  
ries, the  
veins, or  
by both,  
which were  
conceived  
to be porous  
or to trans-  
ude.

Transuda-  
tion well  
known in  
the present  
day to take  
place in  
dead ani-  
mal matter.  
Illustrated.

Additional  
illustra-  
tions.

Narcotic fluids rarely enter to any considerable extent and never so as to do mischief, respecting which, therefore, the power of the cutaneous absorbents is very limited: and there are few poisonous liquids, with the exception of the venereal, that may not be applied with safety to a sound skin.

This double process of secretion and absorption was supposed by the ancients to be performed, not by two distinct sets of vessels expressly formed for the purpose, but by the peculiar construction of the arteries, or of the veins, or of both. These are sometimes represented as being porous, and hence, as letting loose contained fluids by transudation, and imbibing extraneous fluids by capillary attraction. There is, in fact, something extremely plausible in this view of the subject, which, in respect to dead animal matter, is allowed to be true, even in our own day. For, it is well known that a bladder filled with blood and suspended in the air, from a cause we shall presently advert to, is readily permeated with oxygene gass, so as to transform the deep Modena hue of the surface of the blood that touches the bladder into a bright scarlet: and thin fluids injected into the blood-vessels of a dead body transude very generally; insomuch that glue dissolved in water and thrown into the coronary veins, will permeate into the cavity of the pericardium, and by jelling even assume its figure. And hence it is that bile is often found, after death, to pass through the tunics of the gall-bladder and tinge the transverse aorta of the colon, the duodenum or the pylorus with a brown, yellow, or green hue, according to its colour at the time.

The doctrine of porosity or transudation, was hence very generally supported till the time of Mr. Hewson, by physiologists of the first reputation. Boyle, hence, speaks, as Mr. Cruikshank has justly observed, of the *porositas animalium*, and wonders that this property should have escaped the attention of Lord Bacon. Even Dr. Hunter and Professor Meckel believed it in respect



to certain fluids, or certain parts of the body. The experiments of Hewson, J. Hunter, and Cruikshank, have, however, sufficiently shown that, while vessels in losing life, lose the property of confining their fluids, they possess this property most accurately so long as the principle of life continues to actuate them.

There is, moreover, another method by which the ancients sometimes accounted for the inhalation and exhalation of fluids, making a much nearer approach to the modern doctrine, and that is by the mouths of vessels; still, however, regarding these vessels as arteries or veins, and particularly the latter. "The soft parts of the body," observes Hippocrates, "attract matter to themselves both from within, and from without; a proof that the whole body exhales and inhales." Upon which passage Galen has the following comment: "For as the veins, by mouths placed in the skin, throw out whatever is redundant of vapour or smoke, so they receive by the same mouths no small quantity from the surrounding air: and this is what Hippocrates means when he says that the whole body exhales and inhales."

This hypothesis of the absorption of veins, without the interference of lymphatics, has been revived within the last eight or ten years by M. Magendie, and M. Flaudrin, of Paris, who have made an appeal to experiments which appear highly plausible, and are entitled to a critical examination.

The doctrines hereby attempted to be established are, indeed, varied in some degree from those of the Greek schools; and are more complex. In few words, they may be thus expressed: that the only general absorbents are the veins;—that the lacteals merely absorb the food;—that the lymphatics have no absorbent power whatever;—and that the villi in the different portions of the intestinal canal are formed in part by venous twigs which absorb all the fluids in the intestines, with the exception of the chyle, which last is absorbed by the lacteals, and finds its way into the blood through the thoracic duct; and that these fluids are carried to the heart and lungs

CLASS VI.  
II. Absorbent system.

Doctrine of porosity maintained till the time of Hewson.

Arteries and veins conceived also by the ancients to act by absorbing mouths:

a view entertained by Hippocrates and Galen.

This doctrine revived by Magendie and Flaudrin with some alterations.

Hypothesis of Magendie epitomized.



CLASS VI.  
II. Absorb-  
ent system.

directly through the *venæ portæ* whose function it is minutely to subdivide and mix with the blood the fluids thus absorbed, which subdivision and intermixture is necessary to prevent their proving detrimental.

Cuticle  
has no  
power of  
absorption  
in a sound  
state.

M. Magendie further supposes that the cuticle has no power of absorption in a sound state, either by veins or lymphatics; but that, if abraded or strongly urged by the pressure of minute substances that enter into its perspirable pores, the mouths of its minute veins are thus rendered absorbent.

Magendie's  
hypothesis  
of the use  
of lymphatics.

He supposes the function of the lymphatics to consist in conveying the finer lymph of the blood directly to the heart, as the veins convey the grosser and purple part: and that they rise, as the veins, from terminal arteries.

Proper  
lymph  
what?

Proper lymph, in the system of M. Magendie, is that opaline, rose-coloured, sometimes madder-red, fluid which is obtained by puncturing the lymphatics or the thoracic duct *after a long fast*. It is every where similar to itself; and hence differs from the fluid of cavities which is perpetually varying. He supposes the mistake of confounding the two to proceed from a want of attention to this fact.

One of the chief reasons urged for regarding veins as absorbents, is, that membranes which absorb actively have, in his opinion, no demonstrable lymphatics, as the arachnoid. But, according to Bichat, such membranes have no more demonstrable veins than lymphatics; veins are seen to creep on them, but never to enter.

Review of  
Magendie's  
chief experiments.

The two principal experiments on which M. Magendie seems to rely in proof that the veins, and not the lymphatics, are absorbents, are the following:—First, M. Delille and himself separated the thigh from the body of a dog that had been previously rendered insensible by opium. They left the limb attached by nothing but the crural artery and vein. These vessels were isolated by the most cautious dissection to an extent of nearly three inches, and their cellular coat was removed lest it might conceal some lymphatic vessels. Two grains of

the upas tiente were then forcibly thrust into the dog's paw. The effect of this poison was quite as immediate and intense as if the thigh had not been separated from the body: it operated before the fourth minute, and the animal was dead before the tenth. In the second experiment a small barrel of a quill was introduced into the crural artery and the vessel fixed upon it by two ligatures. The artery was immediately cut all round between the two ligatures. The same process took place with respect to the crural vein. Yet the poison introduced into the paw produced its effect in the same manner and as speedily. By compressing the crural vein between the fingers at the moment the action of the poison began to be developed, this action speedily ceased: it re-appeared when the vein was left free, and once more ceased if the vein were again compressed.

CLASS VI.  
II. Absorb-  
ent system.

These experiments are very striking, and, on a cursory view may be supposed to carry conviction with them: but the confidence of those who have studiously followed the concurrent experiments, and the clear and cautious deductions of our distinguished countrymen, Hewson, both the Hunters, and Cruikshank, will not so easily be shaken.

Remarks on  
the above  
experi-  
ments:

We have already observed that lymphatic absorbents, in the opinion of the last of these writers, probably in the opinion of all of them, enter as fully into the tunics of veins and arteries, and even into those of the vasa vasorum, as into any other part of the animal frame: and hence there can be no difficulty in conceiving that the poison employed in these experiments might *accompany* the veins by means of their lymphatics. We also observed that while the lymphatics anastomose, or run into each other more frequently than any other set of vessels, their valves, which alone prevent a retrograde course, and direct the contained fluid towards the thoracic duct, are occasionally placed at a considerable distance from each other, in some instances not less than six inches, and that this length of interval occurs in the

and recon-  
ciliation  
with the  
common  
and es-  
tablished  
doctrine.

CLASS VI.  
II. Absorb-  
ent system.

minute twigs as well as in the trunks. And hence, admitting that, in the veins that were cut or isolated in M. Magendie's experiments, such a vacuity of valves incidentally existed, there is also no difficulty in conceiving by what course the poisons that have already entered into their lymphatics from without should, in consequence of this frequency of anastomosis and destitution of valves, be stimulated to a retrograde course by the violence made use of, and be thrown into the current of the blood from within, by the mouths of those lymphatics that enter into the tunics of the veins; and particularly as the separated vessels were only isolated to a distance of less than three inches, while the lymphatics are occasionally void of valves to double this distance.

In some cases we have reason to believe that the lymphatics that enter into the tunics of the lacteals, which M. Magendie admits to be a system of absorbents altogether distinct from the veins, are equally destitute of valves in certain parts or directions, and communicate by anastomosis some portion of the chyle and any substance contained in it to the interior of the adjoining veins, and consequently to the blood itself: for the experiments of Sir Everard Home upon rhubarb introduced into the stomach of an animal, after the thoracic duct has been secured by a double ligature, show that this substance and consequently others as well, is capable of travelling from the stomach into the urinary bladder, notwithstanding this impediment. In the singular experiments made with prussiate of potash by Dr. Wollaston and Dr. Marcet, the blood which was drawn from the arm during the interval of the introduction of this substance into the stomach, and its detection in the urine, did not, indeed, on being tested, discover the smallest trace of the prussiate, though it was so obvious in the fluid of the urinary bladder. The difficulty of accounting for this is considerable, but may perhaps be explained by the very diffused state of the prussiate in the entire mass of the blood, and its greater concentration when secreted by the kidneys: by which the same

test which was applied in vain, in the former instance, completely succeeded in the latter.

There is, however, another mode of accounting for the result of M. Magendie's experiments without abandoning the well-established doctrine of absorption by the lymphatic system. It is a remark which ought never to be lost sight of, that experiments made upon animals in a state either of great pain or of great debility can give us, by their result, no full proof of the line of conduct pursued by nature in a state of health. In the dead animal body the valves of the lymphatic vessels very generally lose all elasticity and power of resistance, and transmit fluids in every direction; whence, in all probability, that porosity or transudation, which we have already observed, as manifest, occasionally in the stomach and intestines, and in various other organs, on the use of anatomical injections. And hence there can be little doubt, that as an organ makes an approach to the same state of insensibility and irritability, by the severe if not fatal wounds inflicted on it in the course of such experiments as are here alluded to, the valves of its lymphatic vessels make an approach also to the same state of flaccidity, and allow the fluids, whose course they should resist, to pass in any direction.

This altered condition of many parts of the lymphatics in the dead body, was sufficiently shown by Mr. Cruikshank, in a course of numerous experiments made at Dr. Hunter's Museum, in the spring of 1773. The organs chiefly injected were the kidney, liver, and lungs of adult human subjects. In one case, he pushed his injection from the artery to the pelvis and ureter without any rupture of the vessels. In another he injected the pelvis and ureter *from the vein*, which he thought succeeded better than from the artery. In three different kidneys he injected from the uterus the tubuli uriniferi for a considerable length along the mammillæ; and in one case a number of the veins on the external surface of the kidney were evidently filled with the injection. In all these experiments, the colouring matter of the injection was

CLASS VI.  
II. Absorbent system.

Effects produced on animals in a state of great debility or pain, inapplicable to cases in which there is health, strength, and freedom from pain.

Exemplified.

Additional illustrations from Cruikshank:



CLASS VI.  
II. Absorb-  
ent system.

vermillion. In numerous instances he filled the lymphatics of the lungs and liver with quicksilver; and from the lymphatics of the liver, he was able, twice in the adult, and once in the fetus, to fill the thoracic duct itself\*.

and Mekel: Dr. Mekel† had, already shown the same facts by a similar train of experiments, instituted only a year or two before, and the conclusion he drew from them is in perfect coincidence with the explanation now offered. Dr. Mekel's experiments consisted in injecting mercury with great care, but considerable force, into various lymphatics, and minute secreting cavities; and he found that a direct communication took place between such cavities and lymphatics, and the veins in immediate connexion with them: and hence, he contended, that the lymphatics and the veins are both of them absorbents under particular circumstances; the lymphatics acting ordinarily, and forming the usual channel for carrying off secreted fluids; and the veins acting extraordinarily, and supplying the place of the lymphatics where these are in a state of *morbid torpitude* or debility, or the cavity is overloaded. He traced this communication particularly in the breasts, in the liver, and in the bladder: and he thus accounts for the ready passage which bile finds into the blood, when the ductus choledochus is obstructed, as in jaundice; and the urinous fluid which is often thrown forth from the axillæ and other organs upon a suppression of the natural secretion.

General  
result.

It follows therefore, that the experiments of M. Magendie, allowing them to be precisely narrated, are capable of explanation without abruptly overthrowing the established doctrines of preceding physiologists in the same line of pursuit: and we have still ample reason for believing that the economy of secretion and absorption

\* Edin. Med. Com. i. p. 430.

† Nova Experimenta et Observationes de fibrilibus venarum et vasorum lymphaticorum in ductus, visceraque corporis humani, ejusdemque structuræ utilitate. 8vo.

is effected by two systems of vessels distinct from veins and arteries, and in a state of health continually holding a balance with each other.

CLASS VI.

III. In different periods of life, many of the secretions vary considerably in their sensible properties, or relative quantity. Thus the bile of the fetus is sweet, and only acquires a bitter taste after birth. In infancy perspiration flows more profusely than during manhood; and the testes which secrete nothing before the age of puberty, at this time acquire activity, and again lose their power in old age.

III. General effects produced by the action of these two systems on each other.

There are also many of the secernent organs that, in case of necessity, become a substitute for each other. Thus the perspirable matter of the skin when supprest by a sudden chill or any other cause, is often discharged by the kidneys; the catamenia by the lungs; and the serum accumulated in dropsies by the intestines.

Some secernent organs become a substitute for others: Exemplified.

The secretions are moreover very much affected and increased by any violent commotion of the system generally. In hysteria the flow of urine is greatly augmented, while the absorption of bile seems diminished; and hence the discharge is nearly colourless. In violent agitation of the mind, we have already observed that the juices of the stomach become acid; and sometimes the secernents of the skin, and sometimes those of the larger intestines, are stimulated into increased action; whence colloquative perspiration, looseness, or both. The heat and commotion of a fever will sometimes produce the same effect and sometimes a contrary; the skin being dry, parched, and pricking. And occasionally the dryness has been so considerably as to produce a sudden separation of the cuticle from the cutis; of which Mr. Gooch relates a singular instance in a patient who for several years, had once or twice a year an attack of fever accompanied with a peculiar itching of the skin, and particularly of the hands and wrists, that ended in a total separation of the cuticle from these parts: insomuch that it could easily be turned off from the wrist down to the

CLASS VI.  
III. General effects produced by the action of the secernents and absorbents on each other.

fingers ends so as to form a kind of cuticular glove\*. The same distinguished writer gives as singular an instance of the effects of solar heat upon the skin of another patient who had no sooner exposed himself to the direct rays of the sun, than his skin began to be affected with a sense of tickling, became violently hot, as stiff as leather, and as red as vermillion†. In this case we have an instance of highly excited action in the cutaneous excrements of both kinds, and of the formation of new blood-vessels under the cuticle; the more attenuate part of the fluid secreted being rapidly carried off, and hence, the cutaneous integument converted into a coriaceous substance.

Some parts of the body waste and become renewed faster than other parts.

There are some parts of the body that waste and become renewed far more rapidly than others; the fat than the muscles; the muscles than the bones; and probably the bones than the skin; for the dye of the madder-root with which the bones become coloured when this root has for some time formed a part of the daily food of an animal, is carried off far sooner than the coloured lines of charcoal powder, ashes, soot, and the juices of various plants, when introduced into the substance of the skin by puncturing or tattooing it, a practice common among our sailors, and still more so, and carried to a far greater degree of perfection among the inhabitants of the South-sea Islands.

It has been said, indeed‡, that the disappearance of the madder-colour from the bones, affords no proof that the phosphate of lime in which it was seated has itself been carried off at the same time; because the serum of the blood is found to have a stronger affinity for madder than the phosphate coloured by it; and hence will gradually attract and remove it, when the animal is no longer fed with the coloured food. The experiment, however, upon

\* Medical and Chirurgical Observations, 8vo.

† Op. Citat.

‡ Berneuxilli, Diss. de Nutritione, Groning. 1669 4to.

which this latter opinion is grounded, has not been hitherto conducted in such a manner as to be directly applicable to the question; and if it had been, it would afford no proof that a perpetual, though, in that case, a slower change than the madder would exhibit, is not taking place in the bones: nor are we driven to the effects of madder dye upon their solid substance as the only foundation for this opinion; for there is scarcely a bone in the animal system which does not assume a different shape at one period of life compared with that at another period: a remark that peculiarly applies to the flat bones of the skeleton, and forms the chief cause of that wonderful change which the lower jaw experiences as the individual advances from middle life to old age, and which often gives a different character to the entire face\*.

It is from this mysterious power of reproduction appertaining to every part of the system, that we are so often able to renew the substance and function of parts that have been wasted by fevers or atrophy, or abruptly destroyed or lopped off by accident.

In the progress of this general economy, every organ and part of the body secretes for itself the nutriment it requires, from the common pabulum of the blood which is conveyed to it, or from secretions which have already been obtained from the blood, and deposited in surrounding cavities, as fat, gelatin, and lymph. And it is probable that the several organs of secretion, like the eye, the ear, and the other distinct organs of sense, are peculiarly affected by peculiar stimulants and excited to some diversity of sensation.

In Germany, this idea has been pursued so far as in some hypotheses, and particularly that of M. Hubner†, to lay a foundation for the doctrine of a sixth sense, to

CLASS VI.  
III. General effects produced by the action of the secretions and absorbents on each other.

Hence loss of parts in consequence of fever or accidents reproduced.

Every organ secretes for itself from the common pabulum of the blood.

Many organs peculiarly affected by peculiar stimulants, and perhaps excited to different sensations. Gemeinge-fühl of the German writers what.

\* Gibson, Manchester Memoirs, Vol. i. 533.

† Comment. de Cænesthesi, 4794.



CLASS VI.  
III. General effects produced by the action of the secernents and absorbents on each other.

Proofs of peculiar organic sensations and irritations.

Variety of secretions furnished by the same animal in different parts :  
as sugar, sulphur, lime, milk, urine, bile, muriate of soda.

Honey, wax,

which as we observed on a former occasion\*, has been given the name of *selbstgefühl* or *gemeingefühl*, "self-feeling," or "general-feeling." The sensations, however, we are at present alluding to, are not so much general on those of the whole self, as particular or limited to the organs in which they originate; and seem rather to be a result of different modifications of the fluid that causes the common sense of touch, than produced by distinct sensorial secretions. In most parts of the system these modifications are so inconsiderable as to elude our notice, but in others we have the fullest proof of such an effect; for we see the stomach evincing a sense of hunger, the fauces of thirst, the genital organs of venereal orgasm. And in like manner we find the bladder stimulated by cantharides, and the intestinal canal by purgatives; and we may hence conjecture that every other part of the system, where any kind of secretion is going forwards, is endowed with a like peculiarity of irritability and sensibility, though not sufficiently keen to attract our attention.

It is hence we meet with that surprising variety of secretions which are furnished not only by different, but even by the same animal in different parts of the body. Hence sugar is secreted by the stomach, and sometimes by the kidneys; sulphur by the brain; wax by the ears; lime by the salivary glands, the secretories of the bones, and, in a state of disease, by the lungs, the kidneys, the arteries, and the exhalants of the skin: milk by the breasts; semen by the testes; the menstrual fluid by the uterus; urine by the kidneys; bile by the liver; muriate of soda by the secernents of almost every organ; and sweat from every part of the surface.

Hence some animals, as the bee, secrete honey; others, as the coccus *ilicis*, a large store of wax; others, as the viper and scorpion, gum which is the vehicle of their poison: others thread, as the spider and some species of

\* Vol. III. Physiol. Proem. p. 22.

slug; and many silk, as the silk-worm and the pinna, or nacre; whence Reamur denominates the pinna the sea-silk-worm: it is common to some of the Italian coasts, and its silky beard or byssus is worked at Palermo into very beautiful silk stuffs. There are great numbers of worms, insects, and fishes that secrete a very pure, and some of them a very strong phosphorescent light, so as, in some regions, to enkindle the sea, and in others the sky, into a bright blaze at night. Many animals secrete air; man himself seems to do so under certain circumstances, but fishes of various kinds more largely, as those furnished with air-bladders which they fill or exhaust at pleasure, and the sepia or cuttle-fish, with numerous other sea-worms; and by this power they raise or sink themselves as they have occasion. The cuttle-fish secretes also a natural ink, which it evacuates when pursued by an enemy, and thus converts it into an instrument of defence; for by blackening the water all around it obtains a sufficient concealment and easily effects its escape. Other animals, and these also chiefly fishes, secrete a very large portion of electric matter, so as to convert their bodies into a powerful battery. The torpedo-ray was well known by the Romans to possess this extraordinary power: and the gymnotus *electricus* (electric-eel,) has since been discovered to possess it in a much larger proportion. The genus tetradon in one species secretes an electric fluid, in another an irritating fluid that stings the hand that touches it, and in a third poisonous matter diffused through the whole of its flesh.

CLASS VI.  
III. General effects produced by the action of the secretions and absorbents on each other. silk, phosphorescent light,

air,

ink,

electricity.

From the same cause we meet with as great and innumerable a variety of secretions among plants, as camphors, gums, balsams, resins: and, as in animals, we often meet with very different secretions, in very different parts of the same plant. Thus the mimosa *nilotica* secerns from its roots a fluid as offensive as that of assafoetida; in the sap of its stem an astringent acid; its glands give forth gum arabic; and its flower an odour of a very grateful fragrance.

Secretions among plants equally diversified.

CLASS VI.  
III. General effects produced by the action of the secernents and absorbents on each other. No part of an organized substance in which secretion does not take place.

This subject is highly interesting, and might be extended to volumes, but we are already digressing too far. There is no part of the body in which the process of secretion is not going forward: we trace it, and consequently the fabric which gave rise to it, in the parenchyma or intermediate substance of organs, in their internal surfaces and outlets, and on the external surface of the entire frame: thus forming three divisions of prominent distinction, both in respect to locality and to the diseases which relate to them. It is on these divisions, that the orders of the present class are founded.

## CLASS VI.

## ECCRITICA.

## ORDER I.

## MESOTICA.

**Diseases affecting the Parenchyma.**

PRAVITY IN THE QUANTITY OR QUALITY OF THE INTER-MEDIATE OR CONNECTING SUBSTANCE OF ORGANS; WITHOUT INFLAMMATION, FEVER, OR OTHER DERANGEMENT OF THE GENERAL HEALTH.

THE classic term ECCRITICA is a derivative from ἐκκρίνω, “secerno,” “exhaurio,” “to secern or strain off,” “to drain or exhaust,” and is preferred by the author to any other derivative which κρίνω, its primitive, affords, as equally applicable to the two systems of vessels that enter into the general and important economy illustrated in the preceding Proem. The ordinal term MESOTICA is derived from μέσος, “medius;” for which PARENCHYMATICA might have been substituted, but that there are two objections to the use of the latter: the first is that παρὰ is here employed in a different sense from its general signification in the system before us, which is that of “malè,” or “perperam,”—instead of *per* or

CLASS VI.  
ORDER I.  
Origin of  
ordinal  
term.



CLASS VI.  
ORDER I.  
Mesotica.  
Diseases  
affecting  
the paren-  
chyma.  
Parenchy-  
ma in what  
sense used  
by Erasistratus.

*penitus*, its real meaning in parenchyma; and, consequently, the double signification would trench upon that simplicity and uniformity which it is the direct object of the present nomenclature to maintain. The second objection is, that the term parenchyma (παρέγχυμα) is formed upon a false hypothesis invented by Erasistratus, who first employed the term, and held that the common mass or interior substance of a viscus is produced by concremented blood, strained off through the pores of the blood-vessels which enter into its general structure or membranes.

The order embraces the five following genera:

- |                |                          |
|----------------|--------------------------|
| I. POLYSARCIA. | CORPULENCY.              |
| II. EMPHYMA.   | TUMOUR.                  |
| III. PAROSTIA. | MIS-OSSIFICATION.        |
| IV. CYRTOSIS.  | CONTORTION OF THE BONES. |
| V. OSTHEXIA.   | OSTHEXY.                 |

## GENUS I.

## POLYSARCIA.

## Corpulency.

FIRM AND UNWIELDY BULKINESS OF THE BODY OR ITS MEMBERS, FROM AN ENLARGEMENT OF NATURAL PARTS.

POLYSARCIA from *πλούσαρκος*, “carnosus,” “carne abundans,” imports bulkiness from any morbid increase of natural parts, whether fleshy or adipose: and the present genus is co-extensive with this latitude of interpretation. In medical history, however, we know of no morbid increase of this kind except from an accumulation of fat: and hence the genus is at present limited to a single species, as follows:

GEN. I.  
Origin of  
generic  
term.

## 1. ADIPOSA. OBESITY.

## SPECIES I.

## POLYSARCIA ADIPOSA.

## Obesity.

BULKINESS FROM A SUPERABUNDANT ACCUMULATION OF  
FAT.

GEN. I.  
SPEC. I.

THIS species admits of two varieties. For it may be

- |  |  |
|--|--|
| <p>α Generalis.<br/>General obesity.</p> <p>♂ Splanchnica.<br/>Splanchnic obesity.</p> | <p>Extending over the body and<br/>limbs.</p> <p>Confined to the organs or in-<br/>teguments of the trunk.</p> |
|--|--|

α P. adi-  
posa gene-  
ralis.  
General  
obesity.  
Fat where  
accumu-  
lated in  
man.

Dissolved  
by perspi-  
ration.

In man and other animals fat is collected in the follicles of the cellular membrane, accumulated in the groin, axilla, omentum, around the kidneys, and the blood-vessels. It is likewise secreted on the surface of the skin, which it protects from acrid substances, and where it sometimes concretes, often from want of cleanliness, or being intermixed with hardened mucus, in the shape of minute worms, forming the *VARUS punctatus*, or maggot-pimple, of the third Order of the present Class. When the perspiration becomes profuse in consequence of hard walking or other exercise, a certain portion of animal oil is dissolved in this fluid which makes the chief, perhaps the only difference between the matter of perspiration and that of sweat. Fat is, hence, accumulated by diminished perspiration; as it is also by the nature of the aliments fed on, and from idiosyncrasy. It is the basis of steatomatous tumours, and contains the sebacic acid which acts readily on many metals as lead, copper, and iron.

In some  
fishes dif-  
fused over  
the whole  
body.

In many fishes, as the salmon and herring, it is dif-  
fused over the whole body, as though the body were

steeped in it. In other genera of fishes, as the ray, it is found in the liver alone. In some few, as the whale, it appears in the form of flakes, and is called blubber, which sometimes amounts to the enormous quantity of three tons in an individual.

Fat is a bad conductor of heat; and hence, one of its uses is that of keeping the body warm; on which account those who are incumbered with fat perspire with but a small quantity of exercise, and are almost always too hot. We may hence also see why the warmth of the body is retained by oiling the surface, or wearing oiled skin over it. Fat is also of considerable use in lubricating the solids, and facilitating their movements; in preventing excessive sensibility; while by equally distending the skin, it contributes, when not in excess, to the beauty of the person. In cases of extreme hunger, or of abstinence from food, fat is re-absorbed and carried to the blood-vessels; and from an experiment of Dr. Stark \*, it appears to be more capable of supplying the waste of the body than any sort of ordinary food. And hence, there is much probability in the conjecture of Lyonet that insects, destitute of blood, derive their chief nourishment from the fat in which they abound †.

With the exception, however, of the earth of the bones, it is the least animalized of all the substances that enter into the composition of the animal frame. Chemically examined pure fat contains no azote, which is the peculiar characteristic of animalization; it has also little oxygene, consisting chiefly, indeed, of hydrogene and carbone. "I do not consider," says Mr. John Hunter, "either the fat or the earth of bones, as a part of the animal: they are not animal matter: they have no action within themselves: they have not the principle of life ‡." It is of late formation in the fetus: scarcely any trace of

GEN. I.  
SPEC. I.  
α P. adiposa generalis.  
General obesity.

In others, collected in the liver alone.  
Blubber of whales, what.  
Fat a bad conductor of heat and warmth, hence fat persons often too hot, produced by oiling the body.  
Other uses of fat.  
In hunger re-absorbed for food.

Chemical properties.

Formed late in the fetus.

\* Hewson, II. p. 151.

† Tr. Anat. de la chenille qui rouge le bois de saule, pp. 428. 483, et seq.

‡ On Blood, p. 440.



GEN. I.  
SPEC. I.  
= P. adiposa generalis.  
General obesity.  
Mode of production uncertain, supposed to be secreted by peculiar glands: or to transude from exhalant arteries.  
Conjecture of Home.

its existence is discoverable before the fifth month from conception.

The mode of its production is still a matter of controversy. By some it has been supposed to be secreted by peculiar glands, by others merely to transude from exhalant arteries of a peculiar kind. Sir Everard Home has lately started another hypothesis, which is at least highly ingenious and plausibly supported. He has attempted to prove that the fat of animals is produced in the larger intestines, (especially the colon), out of the recrement of the food and the bile, and afterwards conveyed into the system generally by channels yet undiscovered to contribute towards the common growth of the system, especially in early life \*. And some arguments in favour of this opinion may be drawn from the nature of that species of ENTEROLITHUS, to which in the present system is given the name of scybalum, and from the observations with which it has been illustrated †.

In general obesity, bulk of the body sometimes enormous.  
Examples.

In general obesity, or the variety of adipose polysarcia immediately before us, the bulk of the body has sometimes been enormous. It has amounted to five hundred, and nearly six hundred pounds in many instances. Bright, of Maldon, weighed seven hundred and twenty-eight pounds; Lambert of Leicester, seven hundred and thirty-nine pounds a little before his death, which was in the fortieth year of his age. The German journals give us examples of men who weighed eight hundred pounds. Yet the Philosophical Transactions furnish perhaps a still more extraordinary example of this disease in a girl that weighed two hundred and fifty-six pounds though only four years old ‡.

In some persons produced from foods of every kind:

Where a powerful adipose diathesis prevails, fat is often produced whatever be the food fed upon. Ale and porter drank to excess, are, perhaps, the most ordinary means; Akermann gives proofs of the same effect

\* Phil. Trans. for 1813. p. 158. and 1816. p. 301.

† Vol. i. p. 283.

‡ N. 185.

from spirits \*: and in the Ephemera of Natural Curiosities is the case of an individual who generated fat faster, and in larger quantities, upon bread than upon a meat diet †. Indolence and an indulgence in sleep seem necessary, however, in every instance.

In these cases the animal oil is sometimes secreted and deposited in the cellular membrane almost as rapidly as water in anasarca: on which account obesity has by some writers been called, and correctly enough, a dropsy of fat. It is in fact under particular circumstances the soonest formed and deposited, and the soonest absorbed of all the animal secretions. For its formation, however, ease of body and mind are indispensable, and perhaps a slight increase in the flow of sensorial power beyond the common standard, or what has hitherto been the standard of the individual. It is on this account those are apt to become fat who suddenly relinquish a habit of hard exercise either of body or mind for a life of quiet enjoyment, provided the change be not sufficient to interfere with the general health. And for the same reason, as we have already observed, animals which are castrated, and females that do not breed, or who have just ceased to breed, grow fat and corpulent with equal ease; the sensorial power intended for the use of the sexual organs, and to be expended at a particular outlet, being hereby thrown back upon the system generally, and transferred to the adipose secernents. And hence, also, the cause of that increase of bulk which most persons experience about the middle of life, when the muscles having attained their utmost firmness, the stature its full height, and the sexual economy its perfection, there is a less demand for the ordinary supply of sensorial power than has hitherto been made and the surplus is expended in broadening and rounding the general frame by filling up the cells of the adipose membrane with animal oil, instead of elongating it.

GEN. I.  
SPEC. I.  
α P. adiposa generalis.  
General obesity.

and more largely from a bread than a meat diet. Sometimes deposited with peculiar rapidity. Ease of body and mind indispensable for its formation, with a slight increase of sensorial power. Exemplified.

\* Baldinger N. Mag. B. vi. p. 489.

† Dec. III. Ann. VII. VIII. p. 138.

GEN. I.  
SPEC. I.  
& P. adiposa generalis.  
General obesity.  
Plumpness and cheerfulness why associated in our ideas.

For all this, however, there must be an ease of body and mind approaching to cheerfulness; on which account plumpness, and cheerfulness, or good humour, are commonly associated in our ideas: for pain and anxiety, that wear away the corporeal substance generally, make their first inroad on the animal oil, and empty the cells of the adipose membrane before they produce any manifest effect on the muscular fibres, or, as these are collectively termed, the flesh; upon which subject we have already touched in discussing several of the species of the genus MARASMUS\*.

Fat easily carried off, and by what means.  
Illustrated.

Hence the fat becomes absorbed or carried off, as it is secerned and deposited more readily than any other animal substance. By sweating, horse-riding, and a spare diet, a Newmarket jockey has not unfrequently reduced himself a stone and a half in a week or ten days†: and a plump widow has, by weeping, become a skeleton in a month or two.

Evils resulting from a large increase of fat.

A moderate increase in the secretion of animal oil rather adds to the facility of motion, and improves the beauty of the person. But if it much exceed this, the play of these different organs upon each other is impeded, the pulse is oppressed, the breathing laborious, there is an accumulation of blood in the head, a general tendency to drowsiness, and a perpetual danger of apoplexy.

€ P. adiposa splanchnica.  
Splanchnic obesity.

In SPLANCHNIC OBESITY, the encumbered viscera are more or less buried in beds of fat, and usually accompanied with scirrhus affections; making an approach to some species or other of PARABYSMA, as described in the first Class and second Order of the present system‡.

Fat, like dropsy, may be confined to particular organs.

We have observed that general obesity may be regarded as a dropsy of animal oil instead of a dropsy of water. And, as the latter disease is sometimes universal and runs through the whole of the cellular substance, and at others

\* Vol. II. p. 710.

† Code of Health, by Sir John Sinclair, &c.

‡ Vol. I. p. 404.

local, and confined to particular cavities, the former also exhibits both these modifications; and in the variety before us, is confined to individual organs.

It most generally overloads the omentum, and gives that projecting rotundity to the abdomen which is vulgarly distinguished by the name of POT-BELLY, and is well described by Prince Henry in his address to Falstaff, as “a huge hill of flesh \*,”—“a globe of sinful continents †.”

Animal oil is more apt to accumulate in the abdominal viscera than on the surface, and hence while these organs always participate in a general obesity, it is not to be wondered at that they should sometimes be loaded alone. As it has been stated that freedom from pain is necessary to its accumulation, it may, perhaps, be a matter of surprize that scirrhusities should be a concomitant. But this morbid condition takes place so slowly as to produce little or no local disquiet; while the small degree of increased irritability that accompanies their formation, for a reason already assigned, tends rather to promote the morbid deposit than to prevent it.

In attempting a cure of the general disease, the first step is to avoid all the common and more obvious causes as much as possible. Hence, as a life of indolence and indulgence in eating and drinking is highly contributory to obesity, the remedial treatment should consist in the use of severe, regular, and habitual exercise, a hard bed, little sleep, and dry and scanty food, derived from vegetables alone, except where, from a singularity of constitution, farinaceous food is found to be a chief source of obesity. And where these are insufficient, we may have recourse to frequent venesection and such medicines as freely evacuate the fluids whether by the bowels or the skin. And, for the same reason, sialogogues, as chewed

GEN. I.  
SPEC. I.  
P. adiposa splanchnica.  
Splanchnic obesity.  
Omentum mostly overloaded.  
Pot-belly.

Scirrhusities as concomitant with fat, how accounted for.

Mode of treatment in generic obesity.

\* Henry iv. Part i. Act ii.

† Id. Part ii. Act ii.



GEN. I.  
SPEC. I.  
6 P. ad-  
posa splan-  
chnica.  
Splanchnic  
obesity.

Success of a  
spare diet  
and di-  
minished  
sleep exem-  
plified in  
Wood of  
Billericay.

tobacco\*, and mercury, have occasionally been used with success†.

Generally speaking, however, the diet and regimen just recommended with a spare allowance of water will be sufficient to bring down the highest degree of adipose corpulency. Of this we have a striking example in the history of Mr. Wood, the noted miller of Billericay in Essex. Born of intemperate parents, he was accustomed to indulge himself in excessive eating, drinking, and indolence, till, in the forty-fourth year of his age, he became unweildy from his bulk, was almost suffocated, laboured under very ill health from indigestion, and was subject to fits of gout and epilepsy. Fortunately a friend pointed out to him the Life of Cornaro: and he instantly determined to take Cornaro for his model, and if necessary to surpass his abridgements. With great prudence, however, he made his change from a highly superfluous to a very spare diet gradually: first diminishing his ale to a pint a day, and using a much smaller portion of animal food; till, at length, finding the plan work wonders as well in his renewed vigour of mind as of body, he limited himself to a diet of simple pudding made of sea-biscuit, flour, and skimmed milk, of which he allowed himself a pound and a half about four or five o'clock in the morning for his breakfast, and the same quantity at noon for his dinner. Besides this he took nothing either of solids or fluids, for he had at length brought himself to abstain, even from water; and found himself easier without it. He went to bed about eight or nine o'clock, rarely slept for more than five or six hours, and hence rose usually at one or two in the morning, and employed himself in laborious exercise of some kind or other, till the time of his breakfast. And by this regimen he reduced himself to the condition of a middle-sized man of

\* Borelli, Cent. 11. Obs. 11.

† Bartholin, Act. Hafn. 1. Obs. 74.

Bonet, Sepulchr. Lib. 11. Sect. ii. Obs. 36. Appx.

firm flesh, well coloured complexion and sound health\*. A like plan, or rather something approaching it, the present author once recommended to Mr. Lambert of Leicester on being consulted concerning the state of his health. But either he had not courage enough to enter upon it, or did not chuse to relinquish the profit obtained by making a show of himself in this metropolis. He made his choice, but it was a fatal one, for he fell a sacrifice to it in less than three years afterwards.

The local disease is for the most part far less manageable: but it has sometimes yielded to a steady perseverance in the above plan, in connection with active purgatives, and the application of mercurial ointment to the vicinity of the organ affected; or a free use of calomel in the form of pills.

GEN. I.  
SPEC. I.  
C P. adiposa splanchnica.  
Splanchnic obesity.  
Lambert of Leicester.

In local obesity.

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\* Med. Tran. Vol. II. Art. xvii.

## G E N U S II.

## EMPHYMA.

## Tumour.

GLOMERATION IN THE SUBSTANCE OF ORGANS FROM THE  
PRODUCTION OF NEW AND ADSCITITIOUS MATTER: SEN-  
SATION DULL, GROWTH SLUGGISH.

GEN. II.  
Generic  
term ex-  
plained.

PHYMA, in the present system, is limited to cutaneous tumours accompanied with inflammation, as already explained in Class III. Order II\*. EMPHYMA imports, in contradistinction to phyma, a tumour originating below the integuments, and unaccompanied with inflammation, at least in its commencement: while ECPHYMA in Order III. of the present Class, imports, in contradistinction to both, mere superficial extuberances, confined to the integuments alone. The term *glomeration*, or “heaping into a ball,” in the generic definition, is preferred to the more common terms *protuberance* or *extuberance*, because some tumours or emphymata lie so deeply seated below the integuments as to produce no prominence whatever, and are only discoverable by the touch.

The species of this Order, and much of their general character and arrangement, are taken with a few variations from Mr. Abernethy’s valuable Tract on Tumours.

Subject  
appertains  
rather to  
the depart-  
ment of  
surgery  
than of  
medicine :

The subject, indeed, though of a mixed description, is commonly regarded as appertaining rather to the province of surgery than of medicine, from the tendency which most tumours seated on or near the surface have

\* Vol. II. p. 233.

to open externally, or to call for some manual operation. In a general system of the healing art, however, it is necessary to notice them, though it is not the author's intention to dwell upon them at length; but rather to refer the reader, from the few hints he is about to pursue, to Mr. Abernethy's work, as the best comment upon them which he can consult.

GEN. II.  
Emphyma.  
Tumour.  
yet necessary to be noticed in a general system of medicine.

The species embraced by the genus PHYMA are the following:

1. EMPHYMA SARCOMA. SARCOMATOUS TUMOUR.
2. ——— ENCYSTIS. ENCYSTED TUMOUR. WEN.
3. ——— EXOSTOSIS. BONY TUMOUR.

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## SPECIES I.

### EMPHYMA SARCOMA.

#### Sarcomatous Tumour.

TUMOUR IMMOVEABLE; FLESHY AND FIRM TO THE TOUCH.

THE varieties of this species, modified in respect to structure and situation, are very numerous. The following, distinguished by the former quality, are chiefly worthy of notice:

GEN. II.  
SPEC. I.

α Carnosum.  
Fleshy tumour.

Vascular throughout: texture simple: when bulky mapped on the surface with arborescent veins. Found over the body and limbs generally.

ς Adiposum.  
Adipose tumour.

Suetty throughout: inclosed in a thin capsule of condensed cellular substance: con-



GEN. II.  
SPEC. I.  
Emphyma  
Sarcoma.  
Sarcoma-  
tous tu-  
mour.

- γ Pancreaticum.  
Pancreatic tumour.

- δ Cellulosum.  
Cystose tumour.  
Derbyshire-neck.

- ε Scirrhosum.  
Scirrhus tumour.

- ζ Mammarium.  
Mammary tumour.

- η Tuberculosum.  
Tuberculous tumour.

nected by minute vessels.  
Found chiefly in the fore  
and back part of the trunk.  
Tumour in irregular masses;  
connected by a loose fibrous  
substance, like the irregu-  
lar masses of the pancreas.  
Found occasionally in the  
cellular substance, but more  
usually in convoluted  
glands: chiefly in the fe-  
male breast.

Tumour cellulose or cystose:  
cells oval, currant-sized or  
grape-sized, containing a  
serous fluid; sometimes ca-  
seous. Found generally,  
but mostly, in the thyroid  
gland, testis, and ovarium.

Hard, rigid, vascular, infarc-  
tion of glandular follicles;  
indolent, insentient, gla-  
brous; sometimes shrink-  
ing and becoming more in-  
durated. Found in glandu-  
lar structures, chiefly those  
of the secernent system.

Tumour of the colour, and  
assuming the texture of the  
mammary gland: dense and  
whitish: sometimes softer  
and brownish: often pro-  
ducing, on extirpation, a  
malignant ulcer with indu-  
rated edges. Found in va-  
rious parts of the body and  
limbs.

Formed of firm, round, and  
clustering tubercles; pea-

sized or bean-sized; yellowish or brownish-red; when large, disposed to ulcerate, and produce a painful, malignant, and often fatal sore. Found chiefly in the lymphatic glands of the neck: often simultaneously in other glands and organs.

GEN. II.  
SPEC. I.  
Emphyema  
Sarcoma.  
Sarcomatous tumour.

9 Medullare.

Medullary tumour.

Of a pulpy consistence and brain-like appearance; whitish; sometimes reddish-brown; when large, apt to ulcerate, and produce a sloughing, bleeding, and highly dangerous, sore. Found in different parts: chiefly in the testes: at times propagating itself along the absorbent vessels to adjoining organs.

All these grow occasionally to an enormous size, particularly the sarcomatous, the adipose, and the scirrhus. They are all produced by some increased action or irritation in the part in which they occur, the cause of which it is rarely in our power to ascertain. In general, they commence slowly and imperceptibly, and are seldom accompanied with much pain whatever be the extent of their growth. They are all more or less organized through the whole of their structure, by which they are particularly distinguished from those of the next species: and it is highly probable that most of the irritating causes which produce any one, produce all the rest, the modification depending on the difference of site, habit, idiosyncrasy, or local misaffection. In their formation, however, there seems to be a greater tendency to inflammation, and especially adhesive inflammation in the fleshy tumour, or proper sarcoma, than in any of the rest; and, from the more perfect elaboration of its fabric, there is no other form that maintains itself so firmly, or is removed, excepting by excision, with so much difficulty. The origin

General remarks.

Some causes often common to all: the difference in effect produced by habit, idiosyncrasy, or local influence. Peculiar character of sarcoma.

GEN. II.  
SPEC. I.  
Emphyma  
Sarcoma.  
Sarcoma-  
tous tu-  
mour.  
Peculiar  
character  
of scir-  
rhous.

of the adipose may, in some degree, be understood from the remark we have offered under the last genus, and particularly under its second variety.

The scirrhus tumour, when irritated, has a general tendency to run into a cancerous ulcer: for which it is not always easy to account, excepting where there happens to be an hereditary taint in the blood: for neither the tumour nor its ordinary result, as we observed when treating of *carcinus*, is by any means confined to a glandular or to any particular structure, though the secernent glands constitute its most common seat. In Mr. Abernethy's Treatise, the place of the scirrhus tumour, however, is occupied by another to which he gives the name of *carcinoma*, which, in the present system, is regarded as a modification of the scirrhus, degenerated, and ulcerated mostly by a cancerous diathesis; and in such case appertaining to *CARCINUS*, already described in the fourth order of the third class\*; or, where no such diathesis is present, belonging to the same class and order under the genus and species *ULCUS vitiosum* †.

The scirrhus tumour is, in fact, the most important of the whole tribe, not only as leading, under peculiar circumstances, and in particular habits, to the most fatal result, but as being more common to every organ than any other variety whatever; and, in a few instances, common to almost every organ collectively or at the same time ‡.

The other varieties are looser and more spongy, and contain far less of living power: in consequence of which they are more easily disposed to ulcerate, and, when in this condition, often spread and become sordid and malignant from debility alone.

We have said that the tumours of this species will sometimes grow to a vast and preposterous bulk. This is particularly the case with the first variety or fleshy sarcoma, and more especially when it seats itself in the

Other varieties looser and more spongy, and contain less living power.  
Most of the varieties occasionally grow to an enormous size.  
Exemplified in sarcoma.

\* Vol. II. p. 805.

† Vol. II. p. 927.

‡ Henggen, Museum der Heilkunde, Band. II. p. 111.

scrotum forming the SARCOCELE, or HERNIA CARNOSA of authors. Negroes are particularly subject to this affection, and in one instance the tumour weighed fifty pounds\*. It is said that among them the disease is more common to the right testicle than to the left. Stoll, however, has asserted directly the contrary so far as relates to Europeans, and his remarks are supported by the observations of Pfeffinger and Friedius. He has moreover generalised his assertion by contending that the left ovary of women as well as the left testicle of men is more subject to diseases of all kinds than the right†.

GEN. II.  
SPEC. I.  
Emphyma  
Sarcoma.  
Sarcoma-  
tous tu-  
mour.  
Sarcocele,  
or hernia  
carnosa,  
what?

The adipose tumour is also frequently of a very large magnitude. Mr. Abernethy gives an instance of one on the thigh that weighed fifteen pounds after extirpation‡, and M. Leske of another of the weight of nineteen pounds dissected from the face§. In the Journal de Medicine, is an account of a third, that weighed not less than forty-two pounds||.

Exempli-  
fied in  
adipose  
tumour :

The bulk of the scirrhus tumour, however, and especially when seated on the breast, has often equalled and sometimes exceeded the largest of these. M. Leske, indeed, gives a case, in which a tumour of this kind was amputated from the breast, of the enormous weight of sixty-four pounds, that had been increasing for years, and was at last so oppressive as to endanger the patient's life¶.

and in scir-  
rhous tu-  
mour.

The most unsightly, however, of the whole is the SARCOMA *cellulosum*, when it fixes in the thyroid gland; in which situation it is often called Botium, Bronchocele, or Goitre; and, in our own vernacular language, DERBYSHIRE-NECK, from a vulgar idea, of considerable antiquity, that the inhabitants of this county are more sub-

Broncho-  
cele, Boti-  
um, Goitre,  
or Derby-  
shire-neck.

\* Schötte, Phil. Trans. Vol. LXXIII, 1783.

† Nov. Act. Physico-Med. Acad. Nat. Cur. Tom. iv. Norim.

‡ On Tumours, p. 31. 8vo. 1814

§ Auserlesene Abhandlungen, &c. Leipzig, 1774, 8vo.

|| Tom. xx. p. 551.

¶ Op. citat.



GEN. II.  
SPEC. I.  
Emphyma  
Sarcoma.  
Sarcoma-  
tous tu-  
mour.

ject to it than those of other districts. The cells are here very numerous, the fluid often viscid, and sometimes gelatinous; so that, when the tumour bursts, as it occasionally does, spontaneously, the contained fluid is apt to drain away very slowly, and has ulcerated with a large sloughy surface without having half evacuated its contents.

General  
mode of  
treatment.  
May be re-  
solved fre-  
quently in  
their origin.

Most of these may be frequently repressed or resolved if discovered and attended to on their origin. The fleshy, which always commences with some degree of inflammatory action, should be vigorously attacked with leeches, repeated as often as may be necessary, and afterwards with astringents or alterants, as the dilute solution of the superacetate of lead, for the former purpose, and the mercurial emplaster for the latter. An issue or seton in the vicinity will also frequently assist by producing a transfer of action. If this plan do not succeed the tumour should be extirpated by the knife without loss of time, or allowing it to acquire any considerable bulk.

Treatment  
of scirrhus  
tumour.

The scirrhus tumour is usually indicative of weak, instead of entonic, action in the organ in which it makes its appearance, in consequence of which the lymphatics absorb only the more attenuate part of the secreted fluids, and leave the grosser which thicken and harden in the parenchyma. There is little irritation at first, but as the distension and obduration increase, the part becomes stimulated, and, as we have already observed, in a scrophulous cancerous diathesis is apt to call the latent seminum into action, when the hardened tumour degenerates into a foul ulcer. In an early stage they have yielded to local irritants, which have a tendency to excite an increased action, and of a new kind, and hence the advantage of mercurial applications, or emplasters of the gum-resins: and particularly the emplaster of ammoniac with quicksilver which unites the two, and is an admirable preparation. Where, indeed, the irritation is already considerable the more direct of these stimulants must be abstained from, and the irritants and narcotics may be had recourse to with more advantage, as the pre-

parations of lead, acids of almost every kind, and cataplasms of hemlock, henbane, bella donna, or potatoe-leaves. But here also the best and most effectual relief is to be had in extirpation, and the actual cautery as employed by M. Maunoir\* will often be found more effectual and even produce less pain than the knife.

Many of these varieties of tumours on their first appearance, may be repelled by stimulant applications in conjunction with a steady pressure wherever this can be applied; for, with the exception of the first, there is little tendency to inflammation in any of them, and, in the greater number, a decided weakness of the living power. They are often, indeed, connected with constitutional debility, and hence appear simultaneously in different parts of the body. Extirpation in this case is useless; at least till the general frame is invigorated by a tonic regimen and course of medicines. And even then from the peculiar seat or size of the tumour it will not always be found adviseable.

This is particularly true in that variety of the cystous sarcoma which is denominated BRONCHOCELE, GOITRE, or DERBYSHIRE-NECK; and which usually proceeds from an enlargement of the thyroid gland. It is mostly found in females, and in its commencement the patient and her friends always turn a deaf ear to the use of the knife, under a hope that it may yield to a course of external and internal medicine: nor is the tumour, indeed, at all times sufficiently defined from the first for any effective use of chirurgical means. It originates without pain or any discoloration of the skin, and presents a general prominence on the fore part of the neck, that rises so gradually as to be at first almost without an outline. As the prominence increases it becomes harder and somewhat irregular, commonly with a partial feeling of fluctuation, though, in some instances, the tumour appears to be firm throughout. The skin grows yellowish, and the oppressed veins of the neck become

GEN. II.  
SPEC. I.  
Emphyma  
Sarcoma.  
Sarcomatous tumour.

Treatment.

Little tendency to inflammation in any of the varieties: and hence stimulant applications with pressure are often serviceable.

Treatment of bronchocele, or Derbyshire-neck  
Its progress:

and general character.

\* See Vol. II. p. 929.

GEN. II.  
SPEC. I.  
Emphyma  
Sarcoma.  
Sarcoma-  
tous tu-  
mour.  
Treatment.

Varies in  
its internal  
structure.

Appears  
chiefly in  
girls about  
the age of  
puberty.

Stimulants  
and tonics:

especially  
alkaline  
stimulants.

varicose; the respiration is sometimes rendered difficult, and from the same cause the patient is troubled with head-aches. The expediency of removing the tumour is, at this time, highly questionable, and every day increases the difficulty from the growing diameter of its arteries and their proximity to the carotids.

The internal substance and structure of this tumour differs exceedingly in different cases. It has sometimes been found steatomatous throughout, but more generally, as we have already observed, consists of a fluid varying in viscosity, and in the number of cells, or capsules in which it is locked up. It commonly first shows itself in girls who have reached the age of puberty, though it frequently commences at a later period; and is an ordinary symptom of cretinism, as we shall notice when treating of that disease in the course of the present order.

Here also we have deficient living power in the organ affected, and very generally in the entire constitution: for it usually appears in girls of relaxed and flaccid fibres, in many cases partly debilitated by growth, and partly by a larger flow of catamenia than the general tone of the system can sustain without yielding. On this account we may see why cretinism should be a cause.

Stimulants and tonics have hence been found generally useful, as have also repeated and long continued friction with the hand over the area of the tumour, alone or in conjunction with ammoniacal or terebinthinate irritants, chiefly solutions of camphor in spirits. For a reason that does not seem hitherto to have been sufficiently explained, in this kind of tumour, as in those of scrophula, the most successful stimulants are the alkalies: and of these the ammoniacal were at one time believed to be far more so than any of the rest; and hence the patient was limited altogether to a course of burnt sponge or burnt hartshorn, and at one time to burnt toads. There does not seem, however, to be any particular reason for this predilection, and hence in the present day the subcarbonate of ammonia, or the carbonate of soda have been pretty generally allowed to supply the place of all the other preparations

of this kind, as the most convenient form in which the alkali can be given. It is also recommended to be applied externally, in the form of sea-water, or the bibulous sea-plants, as already described in the treatment of scrophula\*: the whole of the remedial process for which may be adopted as the fittest line of conduct on the present occasion: both diseases being chiefly seated in the glandular parts of the animal frame, and accompanied with great indolence in the lymphatic system.

The tumour has sometimes been cured spontaneously, an instance of which occurred not long ago to the present author, in a young lady who had for six or seven years been successively under the care of all the most skilful physicians and surgeons of this metropolis, and who had nevertheless the mortification of finding the protuberance grow much larger, and more unsightly in spite of frictions, and blisters, and setons, and mercury in every form, and the alkalies, and hemlock and hyosciamus, employed jointly or alternately, and in almost every proportion through the whole of this period. The distended skin at length gave way in various places and a thin fluid issued from the foramina. This natural discharge was encouraged, and the sac by degrees exhausting itself, the tumour as gradually diminished, and at length completely disappeared.

GEN. II.  
SPEC. I.  
Emphyma  
Sarcoma.  
Sarcoma-  
tous tu-  
mour.  
Treatment.  
These em-  
ployed both  
externally  
and inter-  
nally.  
Sometimes  
cured spon-  
taneously.  
Exempli-  
fied.

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\* Vol. II. p. 797.



## SPECIES II.

## EMPHYMA ENCYSTIS.

*Encysted Tumour. Wen.*

TUMOUR MOVEABLE; PULPY; OFTEN ELASTIC TO THE TOUCH.

GEN. II.  
SPEC. II.  
Pathological  
remarks.

A VERY small change in the power or mode of action of a secernent vessel will often produce a very considerable change in the nature of the fluid which it secretes. Of this we have a clear proof in the thin and acrid lymph poured forth from the mucous membrane of the nostrils in a catarrh, and the bland and viscid discharge which lubricates this cavity in a state of health; limpid and mucilaginous at first, but gradually hardening into a horny substance. So the lungs, which, when sound secrete a mild, when in a morbid condition throw out a tenacious, phlegm, a watry, or whey-like sanies, or a muculent pus. And we may hence easily account for the great diversity of materials found in the species of tumour before us, which is peculiarly distinguished by being surrounded with a proper cyst, and hence rendered moveable to the touch.

To follow up the subdivision through the whole of the varieties it offers would be almost endless. The following are chiefly worthy of notice:

- |  |   |
|--|---|
| <p><i>α</i> Steatoma.<br/>Steatome.<br/>Adipose Wen.</p> | <p>Encysted extuberance, containing a fatty or suetty substance, apparently secreted from the internal surface of the cyst. Found over most parts of the body, and varying in size from that of a kidney bean to that of a pumpkin.</p> |
|--|---|

- |               |                                     |           |
|---------------|-------------------------------------|-----------|
| ♂ Atheroma.   | Encysted extuberance containing a   | GEN. II.  |
| Atherome.     | mealy or curd-like substance,       | SPEC. II. |
| Mealy Wen.    | sometimes intermixed with harder    | Emphyma   |
|               | corpuscles : apparently secreted as | Encystis. |
|               | the last. Found of different sizes  | Encysted  |
|               | over most parts of the body.        | tumour.   |
|               |                                     | Wen.      |
| γ Melliceris. | Encysted extuberance containing a   |           |
| Honied Wen.   | honey-like fluid. Found of dif-     |           |
|               | ferent sizes over most parts of the |           |
|               | body.                               |           |
| δ Ganglion.   | Encysted extuberance containing a   |           |
| Ganglion.     | colourless fluid : the extuberance  |           |
|               | fixed upon a tendon.                |           |
| ε Testudo.    | Encysted extuberance containing a   |           |
| Horny Wen.    | fluid readily hardening into horn   |           |
|               | or nail : and especially when pro-  |           |
|               | truded externally upon an ulcera-   |           |
|               | tion of the surrounding integu-     |           |
|               | ments.                              |           |

Most of these are supposed by Sir Astley Cooper to be nothing more at first than obstructed and enlarged cutaneous follicles : the sebaceous matter accumulating in the hollow of the follicle, which is lined with cuticle, and expanding it often to a considerable extent by pressure, in consequence of the mouth of the follicle becoming plugged up or entirely closed. Where it is plugged up the obstructed mouth is generally visible by a black dot, which is carbonized sebaceous matter. This being picked off or otherwise removed, a probe may often be easily forced down into the cavity and the whole of the confined material be squeezed out by pressing the sides of the tumour, even when of some inches in diameter, and this with little pain and no inflammation \*. Such Sir Astley regards as the general history of common encysted tumour seated on the surface. But they will

General  
origin of  
encysted  
tumours.

\* Surgical Essays. By A. Cooper and B. Travers. Part II. 1819.

GEN. II.  
SPEC. II.  
Emphyma  
Encystis.  
Encysted  
tumour.  
Wen.  
But varie-  
ties of  
structure  
and con-  
tents from  
adventi-  
tious or  
other cir-  
cumstances.  
Steatome.  
Ganglion.

necessarily vary in their structure and contents from a multiplicity of adventitious circumstances, and perhaps also from idiosyncrasy.

The steatome grows to a larger size than any of the rest. Rhodius gives a case in which it weighed sixty pounds\*: and it has been dissected of the weight of twenty six pounds from the scapula†.

The ganglion is introduced into the present list from the parity of its nature; and in so doing the author has only followed the example of Mr. Sharp. "The ganglion of the tendon," says he, "is an encysted tumour of the meliceris kind; but its fluid is generally like the white of an egg. When it is small, it sometimes disperses of itself. Pressure and sudden blows do also remove it, but for the most part it continues unless it be extirpated‡." It is mostly produced by hard labour, or straining a tendon; and hence is peculiarly common to the wrists of washing-women. In many instances, however, its exciting cause is unknown: and in some cases it appears to be connected with the constitution. It is singular that it should sometimes disappear, as it seems to do, during pregnancy, and return afterwards. Plater records a case of this kind in the ham, and Bartholine, in the Copenhagen Transactions, another on the wrist.

Testudo or  
Horny-wen.

The horny cyst is described by Vogel, under the name of testudo, here adopted. Mr. Abernethy has glanced at it in his treatise, and Sir Everard Home has more fully described and illustrated it in his cases of horny excrescences on the human body, inserted in the Philosophical Transactions: a subject, however, which we shall have occasion to return to when treating of LEPIDOSIS ICTHYIASIS, in the third order of the present class.

Several of  
these some-  
times con-  
nected with  
the habit or  
constitu-  
tion:

I have stated that the ganglion is sometimes connected with the habit or constitution, and the remark may be applied to several of the other varieties. They have

\* Observ. Med. Cent. iii. Patav. 1657, 8vo.

† Fabr. Hildan. Cent. iii. Obs. 63.

‡ Surgery, chap. xxv. p. 128.

hence been found scattered over the whole body\*; and in one instance appear to have been connate and hereditary†. In these cases they will sometimes yield to a general treatment or a change of regimen. Richter gives examples of the cure of the steatome, one of the most difficult to be operated upon by internal means, by emetics‡; and Kaltschmid, by a diet of great abstinence§; by which plan we have already observed that adipose corpulency is commonly capable of being removed, and hence not unreasonably advised when there is a tendency to the formation of adipose tumours.

Electricity, and particularly that of the voltaic trough, seems to have been serviceable in removing many tumours belonging to this and the last species; and having omitted it in its proper place we may here observe that Dr. Eason of Dublin has given an instance, in which a hard scirrhous tumour was removed from the breast of a woman who was struck to the floor, and for sometime deprived of the use of her limbs by a stroke of lightning. It was observed to be much softer almost immediately after the accident, and in a short time totally disappeared, though it had for a long time resisted the power of every application that could be thought of||.

For the rest the writers on practical surgery must be consulted, and especially Mr. Sharp's excellent Treatise, and Mr. Abernethy's work already referred to.

GEN. II.

SPEC. II.

Emphyma

Encystis.

Encysted  
tumour.

Wen.

and yield to  
a general  
treatment,  
or change  
of regimen.Have been  
carried off  
by emetics.Electricity  
has been  
useful.

---

\* O'Donnel, Lond. Med. Journ. vi. p. 33.

† Vogel, Briefen an Haller. i. Hundest.

‡ Chir. Bibl. Band v.

§ Pr. de Steatome fame curato.

Comp. Girard, Lupiologie : ou Traite des Tumeurs connues sur le  
nom des Loupes. Paris 1775.

|| Edin. Med. Comm. iv. p. 84.



## SPECIES III.

## EMPHYMA EXOSTOSIS.

## Bony Tumour.

TUMOUR INELASTIC, OFTEN IMMOVEABLE; HARD AND BONY TO THE TOUCH.

GEN. II. THESE consist of calculous or bony matter; and are  
SPEC. III. sometimes seated immoveably on a bone, sometimes immoveably on the periosteum, sometimes pendulously in a joint, sometimes either moveably or immoveably in some fleshy part of the body, thus constituting the four following varieties:

- |                      |   |
|----------------------|---|
| α Ostea.             | Immoveable; protuberant;  |
| Osteous Tumour.      | seated on the substance of a bone.  |
| ε Periosteum.        | Immoveable: protuberant;  |
| Node.                | from a bony enlargement of the periosteum.                                  |
| γ Pendula.           | Bony tumour hanging pendulous into a joint.                                 |
| Pendulous Exostosis. |   |
| δ Exotica.           | Bony tumour moveable or immoveable, seated in some fleshy part of the body. |
| Exotic Exostosis.    |   |

Pathological remarks.

Lime is one of the substances most easily secreted in the body of all animals. How far it may be *formed* in the body we shall have occasion to notice under the genus OSTHEXIA, forming the fifth of the present order. We behold it at an early period of fetal life, and, in old age when every other secretion has diminished or failed altogether, we are perpetually meeting with examples of a morbid augmentation of this in the coats of the blood-

vessels, the bladder, the brain, and various other organs, afflicting the closing years of life with a variety of troublesome, and not unfrequently highly painful disorders.

GEN. II.  
SPEC. III.

The FIRST VARIETY is found in most of the bones of the body, but chiefly perhaps in the bones of the cranium: where they are sometimes excrecent, and composed of bony spicula resembling crystallizations: sometimes exquisitely hard and glabrous, analogous to ivory\*; no doubt from their being composed of phosphate in a greater measure than carbonate of lime.

α E. Exostosis ostea.  
Osteous tumour.

According to their structure, Sir Astley Cooper has subdivided these tumours into cartilaginous and fungous; and according to their seat, into periosteal, when they commence between the external surface of the bone, and the internal surface of the periosteum; and medullary, when they commence in the medullary membrane and cancellated fabric of the bone†.

This periosteal subdivision includes the SECOND VARIETY of the present species: which is chiefly found as a symptom in lues, and is commonly described under the name of *nodes*. In some instances it has occurred as a sequel of acute rheumatism. And in both cases its treatment must depend upon the nature of the disease to which it appertains, and must form a part of the general plan, as we have already observed when discussing these maladies.

β E. Exostosis periosteae,  
Node.

The THIRD and FOURTH VARIETY are chiefly derived from Mr. Abernethy's classification. The difference of their form and mode of union with the adjoining parts, depends chiefly upon the difference of their seat. "A woman," says Mr. Abernethy, "was admitted in St. Bartholomew's Hospital with a hard tumour in the ham. It was about four inches in length and three in breadth. She had also a tumour in the front of the thigh a little above the patella, of lesser size and hardness. The

γ E. Exostosis pendula.  
Pendulous exostosis.  
Illustrated.

\* Baillie, Morb. Anat. Fascie. x. Pl. i. Fig. 1. 2.

† Surgical Essays, Treatise on Exostosis.

GEN. II.  
SPEC. III.  
γ E. Exostosis pendula.  
Pendulous exostosis.  
Illustrated.

tumour on the ham by its pressure on the nerves and vessels had greatly benumbed the sensibility and obstructed the circulation of the leg so that it was very edematous. As it appeared impossible to remove this tumour, and as its origin and connexions were unknown, amputation was resolved on. On examining the amputated limb, the tumour in the ham could only be divided by a saw: several slices were taken out of it by this means and appeared to consist of coagulable and vascular substance, in the interstices of which a great deal of bony matter was deposited. The remainder of the tumour was macerated and dried, and it appeared to be formed of an irregular and compact deposition of the earth of bone. The tumour on the front of the thigh was of the same nature with that in the ham: but containing so little lime that it could be cut with a knife. The thigh-bone was not at all diseased\*.”

Of the general nature of the exotic variety we shall have to treat under OSTHEXIA INFARCIENS, of which perhaps it is only a modification.

All these cases for surgical rather than medical treatment; and rarely to be cured but by extirpation.

These in all instances are cases for surgical rather than medical treatment, and are seldom to be cured except by extirpation, and, when this cannot be done, and the tumour is seated on a limb, by amputation.

---

\* Surgical Observations, Classification of Tumours. p. 102.

GENUS III.

PAROSTIA.

~~Mis~~ossification.

BONES UNTEMPERED IN THEIR SUBSTANCE, AND INCAPABLE OF AFFORDING THEIR PROPER SUPPORT.

PAROSTIA is a compound from *παρὰ* “perperam” and *ὀστέον*, “os, ossis.” The genus is new, but sufficiently called for. It includes two species connected by the common character of an inaccordant secretion of some one of the constituent principles of the bony material, in consequence of which the substance is rendered too brittle, and apt to break on slight concussions, or other movements, or too soft, and equally apt to bend. These species are as follows:

GEN. III.  
Origin of  
the generic  
term.

- |                       |                           |
|-----------------------|---------------------------|
| 1. PAROSTIA FRAGILIS. | FRAGILITY OF THE BONES.   |
| 2. ——— FLEXILIS.      | FLEXIBILITY OF THE BONES. |



## SPECIES I.

## PAROSTIA FRAGILIS.

*Fragility of the Bones.*

SUBSTANCE OF THE BONES BRITTLE AND APT TO BREAK  
ON SLIGHT EXERTIONS WITH LITTLE OR NO PAIN.

GEN. III.  
SPEC. I.  
Physiological re-  
marks.

BONE, shell, cartilage and membrane, in their nascent state are all the same substance, and originate from the coagulable lymph of the blood, which produces both gelatine and albumen, probably as being possessed of a smaller or larger proportion of oxygene. Membrane is gelatine with a small proportion of albumen to give it a certain degree of firmness: cartilage is membrane with a larger proportion of albumen to give it a still greater degree of firmness; and shell and bone are cartilage, hardened and rendered solid by the insertion of lime into their interior: in the case of shell, the lime being intermixed with a small proportion of phosphoric, and a much larger proportion of carbonic acid; and in the case of bone, with a small proportion of carbonic, and a much larger of phosphoric acid. It is hence obvious that if the earthy and the animal parts do not bear a proper relation to each other, the bone must be improperly tempered, and unadapted to its office: that if the earthy or calcareous part be deficient, its substance must be soft and yielding; and that if the animal part be deficient, or the calcareous part in excess, it must lose its cohesive power, become brittle, and apt to break.

Pathology.

It is the second of these morbid states that forms the proximate cause of the species before us, as the first forms the cause of the ensuing species.

PAROSTIA FRAGILIS is the *fragilitas ossium*, or fragile *vitreum* of authors, and is most frequently found as an attendant upon advanced age. It is, also, occasionally to be met with as a symptom in lues, struma, porphyra, and general intemperance; and has been known as a sequel of small-pox. In most of these diseases the blood becomes attenuate, and the coagulable lymph loses much of its viscosity. In old age the diameter of the blood-vessels becomes contracted, all the secretions are separated less freely, and particularly that of animal oil; and the grossest of them, and hence, particularly the earthy corpuscles, are less freely absorbed, and consequently accumulate. We are, therefore, at no loss to account for the increased hardness and fragility of the bones under these circumstances; nor for their tendency to break upon slight and sudden movements. The author was once present at a church in which a lady nearly seventy years old, in good general health, broke both the thigh bones in merely kneeling down; and on being taken hold of to be carried away, had an *os humeri* also broken without any violence, and with little pain. It was in the winter season, and the cold might have added to the constitutional rigidity. From the general inirritability of the system no fever of importance ensued, and, under the influence of a warm bed, and a diluent but somewhat cordial regimen, the bones united in a few weeks. Mr. Gooch relates a similar case of fracture occasioned by a violent fit of coughing\*.

The common cause seems to consist in a general inirritability of the system, and a torpitude of the absorbent powers, which, by carrying off only the finer and more attenuate particles, and suffering the grosser and particularly the earthy to accumulate, overcharge the bones with this material.

Hence the best remedy is to be found in a plan of warm tonics that may supply the system with something

GEN. III.

SPEC. I.

Parostia fragilis. Fragility of the bones.

Fragilitas ossium, or fragile vitreum, what?

Occurs chiefly in advancing years, and why?

Exemplified.

Common cause.

Remedial process.

---

\* Observations, &c. Appendix.

GEN. III.  
SPEC. I.  
Parostia  
fragilis.  
Fragility of  
the bones.

of the stimulus it stands in need of, and in a free use of acids whether mineral or vegetable, that by their tendency to dissolve calcareous earths, may at least diminish its introduction into the chyliiferous vessels in the process of digestion, if they do not reach the assimilating vessels of the bones and lessen the separation or elaboration at the extremity of the nutritive chain.

Of the mineral acids the sulphuric will generally be found preferable; it seldom gripes or nauseates, and almost always promotes the action of the stomach when weak or indolent. It is hence, also, an excellent tonic, and may be persevered in longer than any of the rest. The muriatic agrees in most cases with the stomach, but not with the bowels, which always become more relaxed during its use than where the other acids are employed. It is on this account, however, peculiarly adapted to cases of habitual constipation. The nitric acid, in a few idiosyncrasies, has proved a very powerful tonic, as well as solvent of animal earth; but in many cases it disagrees with the stomach, and produces flatulency, eructation, and other symptoms of indigestion. Where these cannot be employed, we must have recourse to the vegetable acids, and especially the citric, or tartaric, the last either in its pure form or in that of *creme of tartar*. Lemons and oranges may also be taken copiously, and the carbonic acid, combined with water by means of Nooth's apparatus.

## SPECIES II.

## PAROSTIA FLEXILIS.

*Flexibility of the Bones.*

SUBSTANCE OF THE BONE SOFT AND APT TO BEND AND  
BECOME CROOKED ON SLIGHT EXERTIONS WITH LITTLE  
OR NO PAIN.

THIS is the mollities *ossium* of authors, formerly denominated spina *ventosa*, from its being first noticed on the spine, and accompanied with protuberances which were supposed to proceed from inflation.

Its physiology has been given under the preceding species, with which it is connected in the relation of contrast. As fragility of the bones proceeds from an excess of osseous earth, *flexibility* proceeds from a deficiency of one or more of the elements which constitute it. This deficiency may proceed from two causes, each producing some peculiarity of symptoms, which we shall presently illustrate by examples. For first, there may be too small a secretion or elaboration of calcareous phosphate to allow a sufficient compactness to the bones; and secondly, there may be an adequate separation of the calcareous earth but a deficiency of the phosphoric acid which, we have already observed, is necessary to give it fixation; in consequence of which it is often carried back in a loose state into the circulation, and discharged as a recrement by the kidneys or some other emunctory.

The disease is sometimes idiopathic, and occurs sometimes as a symptom of porphyra, diabetes, and some forms of colic. In direct opposition to the preceding species, moreover, it is commonly found in the earlier rather than in the later periods of life, and has been observed in infancy. It has occasionally been detected in quadru-

GEN. III.  
SPEC. II.  
Mollities  
ossium.  
Spina  
ventosa.

Proceeds  
from a de-  
ficiency of  
the ele-  
ments of  
calcareous  
earth:  
either the  
earth itself;  
or its phos-  
phoric acid.

Found in  
the earlier  
rather than  
in the later  
periods of  
life.



GEN. III.  
SPEC. II.  
Parostia  
flexilis.  
Flexibility  
of the  
bones.  
Has been  
traced in  
the stoutest  
quadru-  
peds.  
Cause ob-  
scure.  
May exist  
in the di-  
gestive  
organs :  
but as often  
in the assi-  
milating  
powers.  
All the ver-  
tebræ have  
been found  
glued to-  
gether.  
Great loss  
of weight  
in the ani-  
mal frame  
as calcu-  
lated by  
Bostock.  
Singular  
exemplifi-  
cation.

Calcareous  
earth

peds, and of the stoutest kinds, as the ox and the lion. It is sometimes general, and sometimes confined to particular bones.

The cause is commonly obscure: it appears frequently to consist in a morbid state of the digestive organs, but is seated, perhaps, as often at the other extremity of the great chain of the nutritive powers, in the assimilating or secernent vessels, where it must necessarily elude all detection. In the museum of Professor Proskaska of Vienna, is a preparation of an adult who died of this disease, in which all the vertebræ are glued into one mass, the sacrum being scarcely distinguishable, and the ribs bent inward, and marked by the impression of the arms, which the patient was in the habit of pressing forcibly against his sides. The whole skeleton is extremely light. This last fact is always the case from the absence of so large a portion of animal earth. An analysis, by Dr. Bostock, of the vertebræ of an adult female who died of the species before us, indicated that the earthy matter was only one eighth part of the weight of the bone, instead of amounting to more than half, which Dr. Bostock estimates to be its proper proportion in a state of health \*.

A singular case of this disease is given by Dr Hosty, of Paris, in the Philosophical Transactions †. The patient, a married woman, between thirty and forty years of age, was attacked by it gradually, after several lyings-in and two falls on the side, which gave her great pain over all her body but fractured no bone. The first decided symptom was an incurvation of one of the fingers, accompanied with a very considerable discharge of bony or calcareous earth by the urine which was loaded with it, and gave a copious deposite. The incurvation by degrees extended to all the limbs, so that the feet were at length bent upwards nearly to the head, but without muscular contraction or fracture. The calcareous matter

\* Transactions of the Medico-Chirurg. Soc. Vol. iv. p. 42.

† Vol. XLVIII. year 1753.

at length ceased to flow towards the bladder, and seems to have been transferred to the salivary glands, from which was discharged a flux of dark discoloured spittle. All the functions of the body were in a state of great disorder; she had, at times, a very considerable degree of fever, which was, at one period, accompanied with head-ache, delirium, and subsultus tendinum. She died in about a twelvemonth from the commencement of the disease: and all the bones, on being examined, were found soft, and supple, though some of them, as the ribs, were still in some degree friable. The scalpel, with very little force, ran through the hardest of them. Nothing extraordinary was found in the thoracic or abdominal viscera, but the right hemisphere of the brain appeared to be one third larger than the left.

In this case, the disease evidently commenced in the bones themselves, and seems to have proceeded from a want of phosphoric acid to give compactness to the calcareous earth; for that there was a sufficiency of this earth is clear, from its being found loose in the fluids, and thrown out as a recement by the urine and saliva till the whole was removed, and nothing of the bones remained but their cartilaginous or membranous fabric. In a similar case related, in a work of considerable value, by Mr. Thompson, this tendency to the discharge of the absorbed and loose earth of the softened bones at the emunctories of the body was still more considerable. The urine, we are told, for the first two years of the patient's illness, deposited generally a whitish sediment, which, upon evaporation, became like mortar; and, on one or two occasions, he voided a few jagged calculi. After this period the calcareous discharge ceased, the bones having no more earth in their composition, as was sufficiently ascertained on the patient's death, which, however, did not occur till nine years from the commencement of the malady\*.

GEN. III.  
SPEC. II.  
Parostia  
flexilis.  
Flexibility  
of the  
bones.  
discharged  
by the  
bladder and  
salivary  
glands.

Case explained.

Discharge  
of calca-  
reous mat-  
ter by the  
emuncto-  
ries of the  
body some-  
times still  
larger.  
Exempli-  
fied.

\* Medical Observations and Inquiries by a Society of Physicians in London. Vol. v. 8vo.

GEN. III.

SPEC. II.

Parostia

flexilis.

Flexibility

of the

bones.

Sometimes

the earth

itself defi-

ciently se-

creted, and

in such

cases no

such dis-

charge.

Illustrated.

In some cases, there seems to be but little deficiency of phosphoric acid, while there is an evident want of earthy matter: for we meet with no calcareous discharge by any of the emunctories, while the union which takes place between whatever portion of the earth is conveyed to the bones, and the phosphoric acid which is secreted at the same time, renders them in some degree friable though weak, and hence as liable to fracture on slight exertions as in the preceding species.

A case of this kind is at this moment under the joint care of the author and Mr. Howship. The patient is a lady, hitherto in good health, of about eight and twenty: both the thigh-bones were broken without any violence about a twelvemonth ago, and all the other bones showed a strong tendency to softness and compressibility. There was great general debility in all the functions, with a feeble and quickened pulse. By perfect quiet, a recumbent posture on a hard and level couch, and the steady use of a tonic regimen and diet, she is now evidently recovering. Her general health is improved, the extremities of both bones appear to be united and buried in an irregular mass of callus that has clustered around them: and it is probable that in a few months she may be able to be removed by an easy conveyance to the sea-coast.

Additional  
illustration.

A somewhat similar case, but of greater severity, communicated by Sir John Pringle to the Royal Society, is contained in its forty-eighth volume \*. The patient was an unmarried female servant of good character. A parostic diathesis seems, from some cause or other, to have existed, and to have been brought into action by a tedious and troublesome chlorosis. One of the legs first gave way and snapped as she was walking from the bed to her chair, and soon afterwards both the thigh bones from a little exertion. From this time her general health suffered, her habit became cachectic, and there being an increasing inability to a supply of compact calcareous

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\* Phil. Trans. year 1753.

earth, all the bones became soft and pliable, and bent in every direction without breaking, while those which were broken never united. Her head, however, throughout was scarcely affected, and her mental faculties continued clear to the last. She died in less than nine months from the commencement of the disease: and on examining her body all the bones were capable of being cut through without turning the edge of the knife.

In one or two of the preceding cases mercury was employed, and carried to the extent of producing salivation, yet without any benefit whatever. It is not easy, indeed, to conceive what benefit could be expected from such a plan. The deficiency of one or all the constituents of perfect and healthy earth of bones, is evidently dependent upon local or general debility, though we cannot always discover the cause of this debility, nor the peculiar circumstances connected with it which give rise to this rather than any other effect of diminished energy. And hence, the only line of treatment we can engage in with any hope of success is that of perfect quiet, and a recumbent posture to prevent distortion and fracture, a plain but nutritive and somewhat generous diet, and a course of tonic medicines. In the case of the lady just adverted to, and who is now in a train of recovery, the medicines chiefly employed were various preparations of cinchona and iron, chiefly the *pilulæ ferri compositæ*, with an allowance of ale instead of wine with her dinner.

GEN. III.  
SPEC. II.  
Parostia  
flexilis.  
Flexibility  
of the  
bones.

Medical  
treatment.  
Mercury,  
has rarely  
been found  
useful.  
Deficiency  
of the con-  
stituents of  
the earth  
of bones  
dependent  
upon local  
or general  
debility.  
Hence per-  
fect quiet  
necessary:  
a recum-  
bent posi-  
tion:  
nutritive  
and gene-  
rous diet:  
and tonic  
medicines.



## GENUS IV.

## CYRTOSIS.

## Contortion of the Bones.

HEAD BULKY, ESPECIALLY ANTERIORLY: STATURE SHORT, AND INCURVATED; FLESH FLABBY, PALE AND WRINKLED.

GEN. IV. THE term CYRTOSIS is derived from the Greek κυρτός, Origin of “curvus, incurvus, gibbosus,” and, among the ancients, generic term, particularly imported recurvation of the spine, or posterior crookedness, as lordosis (λόρδωσις), imported pro-curvedness of the head and shoulders or anterior crookedness. It has, in recent times, more generally been written CYRTONOSOS, literally “morbus incurvus:” but Lordosis what? the term νόσος, or morbus, is pleonastic in a system of nosology, and hence, CYRTOSIS is preferable.

Cyrtonosos.

The genus is intended to include two specific diseases which have a close connexion in many of their most prominent symptoms, and especially in the sponginess and incurvation of the bones, and in the withered appearance of the flesh, insomuch that the second is, by some, regarded as only a modification of the first; but which, however, are peculiarly distinguished from each other by the different state of the mental powers.—These are:

1. CYRTOSIS RHACHIA.

RICKETS.

2. ——— CREPINISMUS.

CRETINISM.

## SPECIES I.

## CYRTOSIS RHACHIA.

**Rickets.**

CHIEFLY AFFECTING THE LIMBS AND BODY : SPINE CROOKED ; RIBS DEPRESSED ; ARTICULAR EPIPHYSES ENLARGED AND SPONGY ; BELLY TUMID ; MENTAL FACULTIES CLEAR, OFTEN PREMATURE.

THERE is some doubt about the origin of both the vernacular names. Cretinism on its first discovery was, by many writers, supposed to be produced by an habitual use of water impregnated with chalk or *creta*, in the low Swiss valleys where it was earliest traced : and it is commonly supposed that the specific name is derived from this opinion.

The English word *rickets*, is usually written in technical language, *rhachitis* ; a name first given to it by Glisson, and said to be derived from *ῥάχις* (*rhachis*), the spine, in consequence of the distortion and curvature of this organ, occasioned by its being no longer able to bear the weight of the head and upper extremities. As this malady, however, was first observed in England, and particularly in the western counties, and was *provincially* denominated *rickets*, before it attracted the attention of medical writers ; it is more probable that *rickets* is derived from the Saxon *ricg* (*ricg* or *rick*) “a heap or hump,” and particularly as applied to the *back*, which also it denotes in a second sense ; so that *ricked* or *ricket* is literally, in its full import, “hump-backed.” It is from this root we derive *hay-rick*, “a heap of hay,” and not, as Dr. Johnson has given it, from “reek,” to smoke. *Rachitis* might, however, be a word sufficiently good for

GEN. IV.  
SPEC. I.

Origin of  
the vernacular names  
of both  
species :  
cretinism.

Rickets or  
rachitis.

Rhachitis  
why not  
employed  
as the specific term.

GEN. IV.  
SPEC. I.  
Cyrtoſis  
Rhachia.  
Rickets.

the preſent purpoſe, were it not for its termination; ITIS, in the medical technology of modern times, implying viſceral inflammation, and being limited, by a ſort of common conſent, to the numerous ſpecies of diſeaſe arranged in the preſent method under the genus EMPRESMA, Class III. Ord. II. which we have conſidered already\*; and on this account it is that, in the ſpecies before us, rachitis is exchanged for rhachia.

Rhachia  
whether  
known to  
the Greeks.

If this diſeaſe were known to the Greeks, we ſhould expect to find it, not indeed under the ſpecific term rhachia, but the generic term cyrtosis; for while neither rhachia nor rhachitis is to be traced among the Greek writers in the ſenſe of diſeaſed action, the latter is common to them in the ſignification already aſcribed to it.

Both ſpe-  
cies proba-  
bly of  
modern  
date:

There is much reaſon for believing, however, that both rickets and cretinism are comparatively of modern date: and it is a ſingular circumſtance that both theſe ſpecies ſhould have been firſt noticed, and apparently have made their firſt appearance coetaneouſly. The earlieſt account we have of rickets is that published by Glisson as it occurred in England in the middle of the ſeventeenth century; the firſt account of cretinism is that of Plater who met with it about the ſame time in Carinthia and the Valais. The diſeaſe is alſo common in Navarre, and in many of the vallies of the Pyrennees, particularly that of Luchen; and it has been obſerved by Sir George Staunton as far off as Chineſe Tartary, in a part of the country much reſembling Switzerland and Savoy in its Alpine appearance. There are ſome writers, however, who have endeavoured to trace both ſpecies of this genus up to the Greeks and Romans. Thus Zeviani contends that rickets, if not cretinism, is to be diſcovered in the Roman names of Vari, and Volgi, as alſo in ſeveral paſſages ridiculing deformity, in Thersites, the ſuppoſed Œſop of Greece, as well as in other authors†; but all

but have  
been of late  
braced in  
regions  
very remote  
from each  
other.

Failure of  
the medical  
paleolo-  
giſts who  
have endea-  
voured to  
trace theſe  
diſeaſes to  
a remote  
period.

\* Vol. II. p. 316.

† Della cura di Bambini, attaccati della Rhachitide. Cap. II. p. 15.

such remarks are too general; he cannot produce a single passage from the medical writers of antiquity, clearly characterizing the peculiar deformities before us. De Haen has attempted to trace the same disease in the works of Hippocrates, but has failed; and hence it is generally admitted in the present day, and has been so from the time of Glisson himself, supported by the concurrent opinions of Bate, Regemorter, Van Swieten, and Trinka, that both rickets and cretinism are of the recent date we have just assigned to them.

The enlargement of the thyroid gland called goitre, or bronchocele, is the most striking feature in the unsightly aspect of a cretin; but this, as Dr. Reeve has observed, is not a constant attendant; nor is there any necessary connexion between goitre and cretinism, notwithstanding the assertions and ingenious reasoning of Fodere. Cretinism is frequently observed without any affection of the thyroid gland, and this gland, on the contrary, is often very much enlarged without the slightest degree of that affection of the intellectual faculties by which cretinism is particularly marked \*.

Cretinism, in many of its symptoms, though not in all, may be regarded as a most severe and complicated modification of rickets; and the pathology of both is closely connected with that of atrophy, as we endeavoured to explain it in its proper place †.

In order that the various parts of the body should thrive and enlarge in the infancy of life, it is necessary not only that there be a due supply of nutritious food, but that the entire chain of the nutritive organs, from the digestive to the assimilating powers, should be in a state of sound health, and capable of fulfilling their respective functions. In several of the varieties of atrophy this is not the case. In one or two of them we have reason to believe that the digestive process is imperfect, and that

GEN. IV.  
SPEC. I.  
Cyrtoſis  
Rhachia.  
Rickets.

Goitre or bronchocele common to cretins, but not a necessary feature of the disease.

Cretinism in many symptoms a complicated modification of rickets: and both allied to atrophy. Physiologi- cal re- marks.

\* Storr, Alpenreise Vorbereitung, p. 55.

† Vol. II. p. 714. Marasmus atrophica.



GEN. IV.  
SPEC. I.  
Cyrstosis  
Rhachia.  
Rickets.

the disease is chiefly seated in the chylific viscera. In others that proper nutriment, though duly introduced into the blood, is not duly elaborated from it and converted into the structure of the different parts whose waste it is to supply; and, consequently, that the disease is chiefly seated in the assimilating powers. And, in treating of atrophy, we observed that the one extremity of the nutritive chain so closely harmonizes with the other, that let the disease commence at which end soever it may, the opposite is affected by sympathy. We also observed that the different divisions of secernents are not all equally under the influence of a morbid torpitude; since occasionally those that secrete the animal oil cease to act long before any of the rest; whence emaciation occurs, and in many instances continues for some time, as a solitary symptom: and the individual falls away in plumpness without being sensible of any other failing.

In rickets the nutritive organs disturbed generally, but chiefly those that supply bony earth.

In rickets the nutritive organs are disturbed generally through the whole length of the chain; but the chief failure is in a due supply of bony earth or the phosphoric acid that should combine with it. The evident intention of this kind of supply is to enable the bones to expand and acquire maturity while growing, and to uphold their strength and firmness afterwards. And so long as they obtain a sufficient supply and the waste earth of the bones is proportionably carried off by the absorbents, so long this part of the animal economy continues perfect: but, with the exception of the fat or animal oil, there is, perhaps, no secretion that is so liable to have its proper balance disturbed whether by excess or deficiency, by a morbid condition of the digestive or of the assimilating powers, as that of bony or calcareous earth.

Proximate cause of rickets and cretinism.

Remote and exciting causes.

A deficient formation then, or elaboration, of bony earth constitutes the proximate cause of both rickets and cretinism. The remote or exciting cause it is not always in our power to ascertain: yet in numerous, perhaps in most instances, we are capable of tracing them to a want of pure air, and a warm and dry atmosphere, nutritious food, regular exercise, cleanliness, and the con-

comitant evils attendant upon a state of poverty; and hence, it is chiefly in the hovels of the poor, the destitute, and the profligate, that both diseases are met with; while the severity of the symptoms is very generally in proportion to the extent or multiplication of these concurrent causes.

But there are other diseases that result from the evils we are now contemplating as well as rickets or cretinism, such as atrophy, scrophula, scurvy, and typhous fevers: and hence, there must be some predisponent cause operating in the present instance, and calling rickets into action rather than any one of the rest. Such cause we do not seem always able to trace, but there is reason to believe that it is sometimes dependent upon an hereditary taint of an idiopathic nature, sometimes upon a scrophulous or venereal depravation in the constitution of the father or the mother. Such, also, is the opinion of Dr. Cullen. "This disease," says he, "may be justly considered as proceeding from parents: for it often appears in a great number of the same family; and my observation leads me to judge that it originates more frequently from mothers than from fathers. So far as I can refer the disease of the children to the state of the parents, it has appeared to me most commonly to arise from some weakness, and pretty frequently from a scrophulous habit in the mother."—"I must remark, however," continues Dr. Cullen, "that in many cases I have not been able to discern the condition of the parents to which I could refer it \*."

Rickets seldom appears earlier than the ninth month of infancy, and not often later than the second year, being preceded, according to Dr. Strack, by a paleness and swelling of the countenance, and a yellow, sulphur hue in that part of the cheeks which should naturally be red†. In some instances it seems to have originated later; in

GEN. IV.  
SPEC. I.  
Cyrtoſis  
Rhachia.  
Rickets.

These causes productive of other diseases as well: and hence some predisponent cause calling rickets rather than any other disease into action. This sometimes an hereditary taint.

Appears chiefly in infancy and childhood. Precursive signs.

Sometimes appears later.

\* Pract. of Phys. Vol. IV. Book II. Ch. IV. § MDCCXXII.

† Act. Philosophico-Medico Soc. Acad. Princ. Hassiæ, &c. 4to. Giessæ. Cathorum.

GEN. IV.  
SPEC. I.  
Cyrto-  
sis  
Rhachia.  
Rickets.

every stage, indeed, of a child's growth, till the bones have acquired their full size and firmness \*: and it is said to have occurred even after this. But in these late appearances we are generally capable of tracing the disease to some local injury, which acts as an exciting cause, and, for the most part, unites it with *PAROSTIA flexilis*.

Commence-  
ment and  
progress of  
the disease.

Rhachia, in its ordinary course, commences imperceptibly and advances slowly: the body becomes gradually emaciated, the flesh flaccid, and the cheeks wan or sallow, with a slight degree of tumefaction. As the flesh diminishes in bulk, the head is found to increase, the sutures gape, and the forehead grows prominent. The spine bends and is incapable of supporting the weight it has to carry; the ribs and sternum partake of the distortion, the former lose their convexity, and the latter projects into a ridge.

Deficiency  
of bony  
matter runs  
through  
the entire  
skeleton.

The same deficiency of bony earth runs through the entire skeleton, and affects not only those parts that are composed chiefly of lime and phosphoric acid, as the flat bones and the middle of the long bones, but the extreme knobs or epiphyses, in which lime is combined as largely with carbonic as with phosphoric acid. And hence, the joints are loose and spongy, and in swelling keep pace with the head. In many instances the lime appears to be elaborated but without its correspondent acids, and consequently, without compactness, and to no purpose: for we can occasionally trace it loose in the urine, in which it forms a calcareous deposit, as though carried off from the blood as a recrement.

Bony earth  
traced loose  
in the  
urine, and  
why?  
All the assi-  
milating  
powers par-  
take in the  
debility:  
but the sen-  
sorial power  
least of all:

All the assimilating powers participate in the debility in a greater or less degree: the process of dentition is slow and imperfect, and, while the cellular membrane is without animal oil, the muscular fibres are tabid, without energy, and almost inirritable. It does not seem, however, that the secretion of sensorial power is so much interfered with as the other secretions of the system.

\* Thomasin, Journ. de Med. Tom. XLIII. p. 222.

Some part, indeed, of what should be sent over the frame at large, appears to be concentrated in the sensorium: so that its equipoise is disturbed, but the general average is not perhaps much diminished. And we are hence able to account for the curious and interesting fact that while the body is generally failing, the mind in many instances advances in its faculties, insomuch that a very slight recapitulation of the names of those who have been pre-eminently gifted with mental talents in every age and nation, and have immortalized themselves as poets, philosophers, and even leaders in the field, will put before the eye of those who have not much attended to this subject, a far greater proportion of the hump-backed, and the ricketty, than they may hitherto have had any conception of. We had occasion to make a like remark when treating of scrophula, and the same fact occurs almost as strikingly in hectic fever. The progress of the mind does not necessarily depend upon the general progress of the body: in the ordinary course of things the one runs parallel with the other; but, in the great field of pathology, where this course is departed from, we are perpetually called to behold proofs that these powers are by no means one and indivisible, and that, even before the hour of death, the spirit gives token of an advance towards perfection, while the body in its general crisis is imbecile, or, perhaps, sinking gradually into ruins.

At the commencement of rickets there is rarely any degree of fever, but, as the disease advances, irritability, as in scrophula, succeeds to inirritability, and a hectic is produced. Or it may happen that the sensorium at last participates in a greater degree with the disease of the rest of the frame, and the mind itself becomes enfeebled, and torpid, or fatuous.

In the treatment of rickets, the eye should be directed to the two following intentions: that of strengthening the system generally: and that of facilitating a supply of phosphate of lime to the organs that form the chief seat of disease.

GEN. IV.

SPEC. I.

Cyrtois

Rhachia.

Rickets.

and hence

the mind

advances

while the

body fails.

The truth

of this ré-

mark easily

confirmed

by a refer-

ence to

history.

Little or no fever at the commencement of the disease, but gendered as it proceeds: hence the mind at length affected. Medical treatment: embraces two intentions.



GEN. IV.  
SPEC. I.  
Cyrtoſis  
Rhachia.  
Rickets.  
Treatment.  
First inten-  
tion, that of  
ſtrengthen-  
ing the ſys-  
tem gene-  
rally.

For the former purpoſe, a pure, dry, and temperate atmosphere, a wholesome and ſomewhat generous diet, regular exerciſe, of ſuch kind as can be indulged in with the leaſt inconvenience, cleanlineſs, and cold-bathing are of eſſential importance, and have often worked a cure alone. And it is poſſibly owing to a more general conviction of the advantage of ſuch a regimen in the preſent enlightened age, that rickets is a complaint far leſs common now than it was a century or even half a century ago.

Metallic  
ſalts.

A tonic plan of medicines, however, ought to be interpoſed, and will effectually co-operate with a tonic regimen. As in infancy we can employ thoſe remedies only which are neither very bulky nor very diſguſtful, we ſhould, for the purpoſe immediately before us, make choice of the metallic ſalts. Mr. Boyle is ſaid to have employed, long ago, with very great ſucceſs, ſome kind of *ens veneris*; and various preparations of copper have ſince been made uſe of, and been highly extolled for their virtues in the preſent diſeaſe, eſpecially by Benevoli, and Büchner. Dr. Cullen, however, is perſuaded that the *ens veneris* of Boyle was a preparation not of copper, but of iron, in fact the *flores martiales* of the old diſpensatories, and there is no doubt that this conjecture is right. From the general irritability of the ſystem, iron, indeed, ſeems to be more adviſeable on the preſent occaſion than any other metal. And its ſtimulant property is a recommendation to its uſe, rather than a diſſuaſive.

Emetics.

If the appetite fail, which is not common, and the ſtomach evince acidity and other dyspeptic ſymptoms, an occaſional emetic will be highly ſerviceable. The bowels muſt be kept open with rhubarb, or neutral ſalts; and, if the abdomen be tumid, or there be any other ſymptoms of an affection of the meſenteric glands, mercury in ſmall doſes may be advantageouſly had recourſe to, and combined with the tonic plan.

Aperients.

Second in-  
tention,  
that of  
producing

The means of carrying into execution the ſecond intention, or that of producing a direct ſupply of osſeous

matter, is accompanied with more difficulty, nor is it certain that we are in possession of any remedy whatever by which this can be accomplished, though it has often been attempted.

Bone may be regarded as a cancellated fabric of gluten whose cells are filled up with the earth of lime and a combination of carbonic and phosphoric acid, of which the former bears the larger proportion. In all cases of rhachia there seems to be a deficiency of these acids, but particularly of the phosphoric, and, in many cases, a deficiency of the earth as well as of the acids.

Acids, however, of every kind, when in excess, have a tendency to dissolve calcareous earth instead of concreting it into a solid mass: and hence one of the most effectual means of preventing that tendency to the separation or production of a morbid superabundance of calcareous earth in OSTHEXIA and LITHIA, is a free use of acids as a solvent.

A hint has been taken from this effect, and, as the disease before us is of an opposite kind, and evinces a deficiency of lime, and especially of phosphate of lime, instead of an excess, it has been ingeniously proposed to pursue an opposite practice, and to have recourse to a free use of alkalies and alkalescent earths, especially lime united with phosphoric acid, with a view of obtaining the deficient materials. Baron Haller and De Haen employed, for this purpose, prepared oyster-shells; but these consist of lime with carbonic acid, and do not, therefore, offer a proper supply for the basis of bones. M. Bonhomme has of late improved upon this practice by substituting the phosphate of lime, or the powder of bones for its carbonate, and uniting it in equal parts with phosphate of soda: of which compound the dose is a scruple for an infant given twice a day. And he recommends that the body should also be bathed morning and night with an alkaline solution, consisting of half an ounce of common potass in a pound of spring water. Abilgaard has carried the alkaline plan still farther, and

GEN. IV.

SEC. I.

Cyrstosis

Rhachia.

Rickets.

Treatment.

Second intention.

a direct supply of osseous matter.

How far this may be accomplished.

Acids when in excess dissolve bony earth,

and hence alkalies and alkalescent earths have been employed in the present disease, and especially phosphate of lime.

GEN. IV.  
SPEC. I.  
Cyrtoſis  
Rhachia.  
Rickets.  
Treatment.  
Second in-  
tention.

How far  
ſuch pre-  
para-  
tions may  
find their  
way with-  
out de-  
com-  
poſition to  
the aſſimi-  
lating veſ-  
ſels.

Illustrated  
from paral-  
lel facts.

has employed the fixed alkali internally \*. And, as acidity of the ſtomach in infants ſeems to be one cauſe of the diſeaſe, and a principal cauſe, as conjectured by Cappel† and Zeviani ‡, where the diſteſtion is evidently at fault, we may, in ſuch circumſtances, reaſonably expect benefit from alkaline preparations or magnesia.

How far any preparation of lime introduced into the ſtomach may be able to find its way without decompoſition through the ſanguiferous ſyſtem to the aſſimilating veſſels, and be ſecerned in the parts affected, has not been exactly determined. Vauquelin made various experiments upon fowls, to decide the queſtion, and M. Bonhomme has ſince attempted others. To themſelves theſe experiments appeared ſatisfactory; but they are open to ſome objections which have not been entirely removed. Yet we ſee every day, in a thouſand inſtances, with what facility ſubſtances, of almoſt every kind, introduced into the ſtomach, are diffuſed with little other change than that of minute diviſion over every part of the ſyſtem. Emetics do not act till they reach the circulating ſyſtem: the colouring matter of the madder-root is conveyed to and tinges the moſt ſolid bones: pruſſiate of potaſh, turpentine and various other balſams enter without change into the bladder. It is hence that rape-ſeed communicates an intolerable taſte to hares that feed upon it, and that the fleſh of ſheep feeding upon worm-wood acquires the bitter flavour of this plant. So, the buck-thorn gives a cathartic property to the fleſh of thruſhes that have ſwallowed it, and ſcammony to goat's milk. Partridges that have feaſted harmleſſly on hellebore, often occaſion ſickneſs when employed as food; and when oxen have grazed in a paſture abounding with alliaceous plants the beef they produce poſſeſſes the ſame taſte and

\* Collect. Soc. Med. Havn. I. Art. I.

† Verſuch einen vollereſtändigen Abhandlung über die Engliſche krankheit, &c.

‡ Della cura di Bambini, attacati della Rhachitide. Cap. II. p. 80.

smell. And hence, phosphate of lime may, in like manner, be conveyed from the stomach to the secernents of the bones, and reach them without chemical decomposition.

As rhachia is peculiarly distinguished by a great irritability and want of action, rubefacients and other cutaneous stimulants have often been employed, and proved serviceable, as well from the friction that accompanies their use as their own acuating power. These have sometimes been so far heightened as purposely to excite some degree of fever, with a view of carrying off the disease by this means, as dyspepsy, cephalæa, and chronic rheumatism have often been carried off by a smart attack of a tertian intermittent. We are told that a practice of this kind prevails very generally in the Western Isles, and is productive of great success. The heating oil of the skate-fish is rubbed every evening first upon the wrists and ancles of the patient, which raises a fever of several hours' duration: and when the inunction upon these parts has lost its effect, it is then applied, in like manner, to the knees and elbows; and afterwards, in like manner, to the spine; so that a certain degree of pyrexia may be daily maintained. And when friction, on all these organs, is found to fail, as fail it will by degrees, a flannel shirt dipped in the oil is finally had recourse to, and worn on the body, which produces a higher degree of fever than has yet existed; and continues to be worn, after fresh illinations, till a cure is obtained, which is said to be pretty certain, and usually in a short time.

Many ingenious devices have been executed by surgical instrument makers for giving support to the limbs that seem mostly to suffer, and for removing the weight of the body from one part to another. In infancy, however, all these are of little avail, and where the disease pervades the entire skeleton, they will always do as much mischief as good, by aiding one part at the expense of another. The best mechanical instruments are a hard incompressible couch, and a level floor on which the infant may lie at full length, and stretch his limbs as

GEN. IV.  
SPEC. I.  
Cyrto-sis  
Rhachia.  
Rickets.  
Treatment.  
Second intention.  
Irritants  
and rubefacients  
how far  
useful.

Exemplified.

Mechanical aids  
how far  
advisable.



GEN. IV.  
SPEC. I.  
Cyrto-  
sis  
Rhachia.  
Rickets.  
Treatment.  
Second  
intention.

he pleases. The couch should be made light and moveable, so that he may be carried upon it in the open air for exercise. Moderate warmth is of great service, but a downy bed that gives way to the pressure of the body and sinks into unequal hollows cannot fail to increase the incurvation.

## SPECIES II.

### CYRTOSIS CRETINISMUS.

#### Cretinism.

CHIEFLY AFFECTING THE HEAD AND NECK; COUNTENANCE VACANT AND STUPID; MENTAL FACULTIES FEEBLE OR IDIOTIC: SENSIBILITY OBTUSE: MOSTLY WITH ENLARGEMENT OF THE THYROID GLAND.

GEN. IV.  
SPEC. II.  
How distinguished  
from rickets.

CRETINISM makes a very close approach to rickets in its general symptoms. It differs principally in the tendency to the peculiar enlargement of the thyroid gland, which, in France, is denominated goitre, and with us, Derbyshire-neck, and in the mental imbecility which accompanies it from the first.

Occasional  
precocity  
of mental  
powers in  
rickets:

In treating of rhachitis we observed, that, while all the functions of the general frame are here in a state of great debility, with the exception of the mental, these last exhibited, in many instances, a precocity and a vigour rarely found in firm health. And we endeavoured to account for it by supposing that the flow of sensorial fluid instead of being in deficiency, like all the other secretions, is only disturbed in its balance; and that much of the proportion of this, which should be distributed among the motory fibres of the frame, and prevent that inirritability and muscular inertness by which rickets is so peculiarly distinguished, is transferred, under a differ-

ent modification, to the sensorium, and gives to the mental faculties a more than ordinary degree of quickness.

In cretinism the organ of the brain seems to follow the fate of the rest of the body, and, in many cases, even to take the lead, so that the chief imbecility is to be found in this region. For the peculiar symptom of goitre it is not so easy to account. We know so little of the purpose, and even of the fabric of this gland, as to be incapable of assigning its use in the animal economy, and hence, it is not much to be wondered at that its peculiar tendency to associate, in the present disease, with the morbid condition of the bones and of the intellect, should not hitherto have been ascertained. It does not always, however, accompany the other symptoms, though it is, for the most part, an associate.

We have already observed that cretinism was first distinctly noticed and described by Plater about the middle of the seventeenth century, as occurring among the poor in Carinthia and the Valais; and that it was afterwards found in a still severer degree in other vallies of Switzerland and the Alps generally; as it has since been detected in very distant regions where the country exhibits a similarity of features, as among a miserable race called Caggets, inhabiting the hollows of the Pyrennees, whose district and history have been given us by M. Raymond, and as far off as Chinese Tartary, where it is represented as existing by Sir George Staunton.

On the first discovery of cretinism it was ascribed by some to the use of snow-water, and by others to the use of water impregnated with calcareous earth: both which opinions are entirely without foundation. The first is sufficiently disproved by observing that persons born in places contiguous to the glaciers, and who drink no other water than what flows from the melting of ice and snow, are not subject to the disorder; and, contrarywise, that the disorder is observed in places where snow is unknown. The second is contradicted by the fact that the common waters of Switzerland, instead of

GEN. IV.

SPEC. II.

Cyrtosis

Cretinismus.

Cretinism.

In cretinism the organ of the brain follows the fate of the other organs, and hence mental weakness.

Appearance of goitre not easily accounted for:

yet not always an accompaniment.

Chorography of cretinism.

Whether snow-water be a cause: or water impregnated with calcareous earth.

These opinions without foundation.

Disproof of the first.

Disproof of the second.

GEN. IV.  
SPEC. II.  
Cyrtoſis  
Cretiniſ-  
mus.  
Cretiniſm.

being impregnated with calcareous matter, excel thoſe of moſt other countries in Europe in purity and flavour. “There is not,” obſerves Dr. Reeve, “a village, nor a valley, but what is enlivened by rivulets, or ſtreams guſhing from the rocks. The water uſually drunk at La Batia and Martigny is from the river Dranſe, which flows from the glacier of St. Bernard, and falls into the Rhone; it is remarkably free from earthy matter, and well taſted. At Berne the water is extremely pure, yet, as Haller remarks, ſwellings of the throat are not uncommon in both ſexes, though cretinism is rare.

Snow-water  
from its  
chillineſs  
may how-  
ever prove  
an auxi-  
liary.

Why calca-  
reous water  
ſhould be a  
ſuppoſed  
cauſe ex-  
plained.

As comfortable and genial warmth form one of the beſt auxiliaries in attempting the cure of both cretinism and rickets, there can be no doubt that the chill of ſnow-water, if taken as ſuch, muſt conſiderably add to the general debility of the ſystem when labouring under either of theſe diſeaſes, though there ſeems no reaſon for ſuppoſing that it would originate either. It is not difficult to explain why water impregnated with calcareous earth ſhould have been regarded as a cauſe: for in cretinism, as in rhachia, the calcareous earth deſigned by nature for building up the bones, is often ſeparated and floats looſe in various fluids of the body for want of a ſufficiency of phoſphoric acid to convert it into a phoſphate of lime, and give it ſolidity. And as it is, in conſequence hereof, pretty freely diſcharged by the urine, it ſeems to have given riſe to the opinion that ſuch calcareous earth was introduced into the ſystem with the common beverage of the lakes or rivers, and produced the morbid ſymptoms.

Real re-  
mote cauſe  
aſſigned by  
Sauiſſure.

M. de Sauiſſure has aſſigned a far more probable, and unqueſtionably the real cauſe of the diſeaſe in referring us to a few other physical features of the Alpine diſtricts in which it makes its appearance chiefly. The vallies, he tells us, are ſurrounded by very high mountains, ſheltered from currents of freſh air, and expoſed to the direct, and, what is worſe, the reflected rays of the ſun. They are marſhy, and the atmosphere is hence humid, cloſe, and oppreſſive. And when to theſe

chorographical causes we add the domestic ones, which are also well known to prevail very generally among the poor of these regions, such as meagre, innutritious food, indolence and uncleanness, with a predisposition to the disease from an hereditary taint of many generations, we can sufficiently account for the prevalence of cretinism in such places, and for the most humiliating characters it is ever found to assume.

GEN. IV.  
SPEC. II.  
Cyrto-  
cretin-  
ism.  
Cretinism.

The general symptoms of cretinism are those of rhachia; but the disease shows itself earlier, often at birth, and not unfrequently before this period, apparently commencing with the procreation of the fetus, and affording the most evident proofs of ancestral contamination. The child, if not deformed and cachectic at birth, soon becomes so; the body is stunted in its growth, and the organs in their developement; the abdomen swells, the skin is wrinkled, the muscles are loose and flabby, the throat is covered with a monstrous prominence, the complexion wan, and the countenance vacant and stupid. The cranium bulges out to an enormous size, and particularly towards the occiput, for it is sometimes depressed on the crown, and at the temples; insomuch that to a front view the head, in some cases, appears even diminutive. The blunted sensibility of these wretched beings renders them indifferent to the action of cold and heat, and even to blows or wounds. "They are, generally," observes M. Pinel, "both deaf and dumb. The strongest and most pungent odours scarcely affect them. I know a Cretin who devours raw onions and even charcoal with great avidity. A striking proof of the coarseness and imperfect developement of the organ of taste. Their organs of sight and feeling are equally limited in their operation. Of moral affections they seem wholly destitute; discovering no signs of gratitude for kindness, shown to them, nor any attachment to their nearest relations."

Commence-  
ment and  
progress of  
cretinism.

Why a  
front view  
of the  
head ap-  
pears dimi-  
nutive.

Miserable  
want of  
sensation.

and of  
mental and  
moral  
powers.

The medical treatment, if medicine can ever be of any avail, should be conducted upon the principles and consist of the process laid down under the preceding species.

Medical  
treatment.



## GENUS V.

## OSTHEXIA.

*Ostherp.*

SOFT PARTS MORE OR LESS INDURATED BY A SUPERFLUOUS SECRETION AND DEPOSITE OF OSSIFIC MATTER.

GEN. V.  
Origin of  
the generic  
name.

OSTHEXIA is derived from *ὀστώδης*, “osseous or bony,” and *ἔξις*, “habitus or habit,”—“ossific diathesis or idiosyncrasy.” This morbid affection, though repeatedly alluded to and described by miscellaneous writers, has seldom been attended to in nosological arrangements. It does not occur in Dr. Cullen’s Classification: but he alludes to it in his “Catalogue of omitted Diseases” as one of those which he thinks ought not to have been omitted.

Physiological  
remarks.

We have had various occasions for remarking that as the calcareous earth, which gives compactness and solidity to the skeleton of the animal frame, becomes waste, and is consequently absorbed and carried off, it is necessary that there should be an equal and regular supply of the same material. This is partly obtained from the lime which enters, in some proportion or other, into almost every kind of nutriment on which we feed: but it seems to be obtained also, and perhaps in a larger proportion, by some chemical elaboration out of the constituent principles of the blood itself: for a healthy animal of any kind appears to supply itself with the requisite quantity of bony earth whatever be the nature of its food, and though the soil on which it is grown contains no lime whatever, as is the case in several of the Polynesian islands, and throughout the whole of New South Wales, on the hither side of the Blue Mountains.

In several of the preceding genera we have seen that this material is produced or secreted in deficiency: in the species appertaining to the present genus, it is, on the contrary, produced or secreted in excess: and deposited, sometimes in single organs for which it is not naturally intended, and sometimes throughout the system at large, occasionally in the parenchyma or general substance of organs, and occasionally in the membranes or tunics by which they are covered and protected, or in the vessels by which they are furnished with their proper stores.

We see much of this irregularity in old age the cause of which we have already endeavoured to explain. The excernent vessels of both sets, absorbents and secretories, partake of the common debility and torpitude of this advanced period. There is hence, in all probability, a smaller quantity of lime, as of every other secerned material, formed at this period than in the earlier and more vigorous stages: but however small the quantity, it is carried off, on account of the grossness of its corpuscles, less freely by the debilitated absorbents than the finer and more attenuate fluids, and is hence apt to stagnate first in the bones themselves, which, as we have already observed, are hereby rendered unduly impacted and brittle, and next in the lymphatics of every part of the system, and especially those that enter into the tunics of the sanguiferous vessels, which are hereby often rendered rigid or even ossific.

This is a natural consequence of the debility of advancing years. But we not unfrequently meet with a like effect in the earlier stages of life, and in persons of the fullest and most vigorous health, in which case there can be no question that the lime thus profusely and erratically deposited is produced and secreted in excess, and consequently by a state of action the very reverse of that we have thus far contemplated.

The mischief thus originating,—as it appears in the parenchyma, and in the membranes or vessels of organs, and thus lays a foundation for two very distinct trains of

GEN. V.  
Osthexia.  
Osthexy.  
Calcareous  
earth in os-  
thexy pro-  
duced in  
excess  
and depo-  
sited in  
single  
organs, or  
over the  
whole  
frame.

Ossifica-  
tions in old  
age not  
from excess  
of the ma-  
terial but  
from a tor-  
pitude of  
the secer-  
nents and  
absorbents.

When os-  
thexy oc-  
curs in  
earlier life  
and in vigo-  
rous health  
excess of se-  
cretion un-  
question-  
able.

GEN. V.  
Osthexia.  
Osthexy.

symptoms,—may be contemplated under the two following species :

1. OSTHEXIA INFARCIENS.

PARENCHYMATOUS OSTHEXY.

2. ——— IMPLEXA.

VASCULAR OSTHEXY.

## SPECIES I.

### OSTHEXIA INFARCIENS.

#### Parenchymatous Osthexy.

OSSIFIC MATTER DEPOSITED IN NODULES OR AMORPHOUS MASSES, IN THE PARENCHYMA OF ORGANS.

GEN. V.  
SPEC. I.  
Found most commonly in the kidneys and bladder : but here detached and with peculiar symptoms.

THE most common organs in which calculous concretions are found, are the kidneys and the bladder ; but, as in these they form detached and unconnected balls, and are intimately united with local symptoms or a morbid state of these organs and constitute only one of various kinds of concretions, it will be most convenient to consider them when treating of the particular diseases to which they give rise, or of which they are prominent symptoms.

Found interiorly, mostly in the pineal gland.

The organ in whose interior fabric the present concretions are most usually found, seems to be the pineal gland ; of which almost all the medical and physiological journals, as well domestic as foreign, give numerous examples, as do likewise Diemerbroek, De Graaf, Schrader, and other monographists. In this gland they have also been found in other animals than man, chiefly those of the deer kind.

Often found in other organs.

Such deposits are also frequently found in various other parts of the substance of the brain ; in the lungs \* ;

\* Baillie, Morb. Anat. Fasc. II. Pl. 6.

in the substance of the heart, in one instance weighing two ounces \*; in the thymus gland †; in the thyroid ‡; in the parotid §; the sublingual, and most other glands ||; in the deltoid and most other muscles: nor is there an organ in which it has not been traced on different occasions. Paullini records one instance of an ossified penis, and in the *Ephemera* of Natural Curiosities, we meet with another ¶.

GEN. V.  
SPEC. I.  
Osthexia  
infarciens.  
Parenchy-  
matous  
osthexy.

The general pathology we have already given: the symptoms and effects vary to infinity. Most of the above cases seem to have occurred after the meridian of life; and in many instances to have been connected with atonic gout, which, by adding to the debility of advancing age, adds to its tendency to form such deposits.

General  
pathology  
already  
given.

## SPECIES II.

### OSTHEXIA IMPLEXA.

#### Vascular Osthexy.

OSSIFIC MATTER DEPOSITED IN CONCENTRIC LAYERS IN THE TUNICS OF VESSELS OR MEMBRANES, RENDERING THEM RIGID AND UNIMPRESSIBLE.

ALL the vessels and membranes as well as the more massy or complicated organs of the body, are subject to deposits of phosphate or carbonate of lime, from the

GEN. V.  
SPEC. II.  
All the  
vessels and  
membranes  
subject to  
earthy de-  
posits from  
causes  
already  
stated.

\* Burnet, Thesaur. Med. Pract. III. 254.

† Act. Med. Berol. Tom. I. Dec. III. 28.

‡ Contuli, De Lapid. &c.

§ Plater, Observ. Lib. III. 707.

|| Haller, Pr. de induratis corp. hum. partibus Goett. 1753.

Pranser, Diss. de induratione corp. in specie ossium. Leips. 1705.

¶ Dec. II. Ann. v.



GEN. V.  
SPEC. II.  
Osthexia  
implexa.  
Vascular  
osthexy.

causes already pointed out: some of which are those of weak and others of entonic action: the former operating upon the debilitated and the aged, the latter upon the young and vigorous, who labour under a peculiar diathesis or predisposition to the formation of bony earth. The chief modifications appertaining to this species may be contemplated under the following varieties:

- α Arterialis. Ossification of the aorta or other Arterial osthexy. large arteries.
- ε Membranacea. Ossification of membranous or Membranous osthexy. connecting parts.
- γ Complicata. Ossification of different parts Complicated osthexy. simultaneously.

α O. im-  
plexa arte-  
rialis.  
Arterial  
ossification.  
When in  
the aorta  
rarely con-  
fined to it.  
Exempli-  
fied.

Where the deposit takes place in the aorta, it is rarely confined to this artery alone, but spreads to some parts of the heart, and, perhaps, of the pulmonary, or some other large artery as well. Dr. Baillie gives an instance in which a considerable portion of the right ventricle and right auricle of the heart were affected at the same time\*; and Morgagni another in which the ossification extended to the valves, and this too without having produced in the patient either palpitation or dyspnœa†. So wonderfully is the instinctive or remedial power of nature capable, in various instances, of accommodating the general system to morbid changes.

We have other examples of the trunk of the aorta being wholly ossified‡, and in one case so rigidly, both in its ascending and descending branches, as to compel the sufferer to maintain an erect position§.

ε O. im-  
plexa mem-  
branacea.  
Membran-  
ous ossifi-  
cation.

The most troublesome of the membranous ossifications are those of the pleura, of which an example is given by Dr. Baillie in his Morbid Anatomy||: though the

\* Morb. Anat. Fasc. v. Pl. 2.

† De Sed. et Caus. Ep. xxiii. 11.

‡ Buckner, Miscel. 1727, p. 305.

§ Guattani, De Aneurism. &c.

|| Fascic. 11. Pl. 1.

trachea affords at times severe and even fatal examples of this affection \*, in consequence of the stricture which is hereby occasionally produced. Mr. Chester gives a singular case of a spread of this disease over the thoracic duct, the ileum, and other abdominal viscera.

Yet, in the structure of the arteries, ossification is found more frequently than in any other organ, with the exception of the pineal gland: the cause of which seems to have been first glanced at by Dr. Hunter, and was afterwards followed up with much patient investigation and accuracy of research by Mr. Cruikshank. The former used to send round at his lectures a preparation of the patella, in which he demonstrated that the ossification of that bone began in the arteries running through the centre of the cartilage which, in young subjects, supplies the place of a bony patella. Mr. Cruikshank on prosecuting the subject, discovered that all other bones ossify in the same manner, and made preparations in proof of this fact; distinctly showing that the ossification of bones is not only begun, but carried on and completed by the ossification of their arteries: and, consequently, that arteries have a natural tendency to become ossified above that of all other parts of the system whatever.

One of the most extensive appearances of this habit acting morbidly on the tunics of vessels, is related by Dr. Heberden † in the Medical Transactions, in the case of a very old man who at last died suddenly, as well indeed he might, since almost the only viscus that was found, on examination, to be in a healthy state was the liver. The internal carotid and basiliary arteries with many of their primary branches were ossified. Through the substance of the lungs, which firmly adhered to their walls, were scattered small calculous tumours. In the heart the valves of the left auriculo-ventricular opening were partially ossified, those of the aorta completely so,

GEN. V.  
SPEC. II.  
6 O. im-  
plexa mem-  
branacea.  
Membran-  
ous ossifi-  
cation.

Yet the  
disease  
found more  
frequently  
in the arte-  
ries than in  
any part,  
except the  
pineal  
gland:  
why found  
thus freely,  
illustrated.

7 O. im-  
plexa com-  
plicata.  
Complicat-  
ed osthe-  
xy.  
Singular  
example.

\* Kirkring, Specileg. Anat. Obs. 27.

† Med. Trans. Vol. v. Art. XIII.

GEN. V.  
SPEC. II.  
γ O. im-  
plexa com-  
plicata.  
Complicat-  
ed osthexy.

and small depositions of bony matter were found in the tendinous portions of the carneæ columnæ. The coronary artery was ossified through its whole extent. The descending thoracic and abdominal aorta, with all their primary branches, were converted into cylinders of bone, as were the external and internal iliacs. It is not necessary to pursue the description into the morbid appearances of almost every other organ: and I shall only observe farther that though the substance of the brain was healthy, the ventricles contained about eight ounces of water. And yet with all this extent of diseased structure, the patient appeared almost to the last to be of a sound constitution and free from the usual infirmities of advanced age, with the exception of an habitual deafness; and attained upwards of fourscore years of age before he died.

The patient  
sometimes  
so stiffened  
as to lose  
all power  
of motion.  
Exempli-  
fied.

Where this diathesis prevails very decidedly, it sometimes converts not merely the vessels but the whole of the tendons and the muscles into rigid bones, and renders the entire frame as stiff and immovable as the trunk of a tree. There is a striking illustration of this remark in a case communicated to the Royal Society by Dr. Henry of Enniskillen \*. The patient was a day labourer who had enjoyed good health till the time of his being attacked with this disease. It commenced with a pain and swelling in the right wrist, which gradually assumed a bony hardness, and extended up the course of the muscles as high as the elbow, the whole of which were converted into a bony hardness, and were of double their natural size. The left wrist and arm followed the fate of the right: and the line of ossification next shot down to the extremities of the fingers on both sides, and afterwards up to the shoulders, so that the joints were completely ancylosed, and the man was pinioned. At the time of communicating this history, the same ossific mischief had attacked the right ankle with a like degree of pain, swell-

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\* Phil. Trans. Vol. LI, year 1759.

ing, and bony induration up the course of the muscles: in which state the man was discharged from the hospital as incurable, after salivation had been tried to no purpose.

Salivation has, indeed, often been tried, probably from its success in removing venereal nodes, but it does not seem to have been of much more avail in any instance than in the present.

We have pointed out two opposite causes, or rather states of body, in which a tendency to ossification chiefly shows itself. One is that of general debility, and the other of an entonic action in the assimilating organs which are chiefly concerned in the fabrication or separation of lime: and in laying down any plan for relief, it seems necessary to attend to this distinction. Where debility becomes a predisponent of morbid ossification, it is mostly a result or concomitant of old age, a scrophulous diathesis or atonic gout; and in all these cases warmth, a generous diet, and tonic course of medicines will form the most reasonable curative plan that can be pursued; and that which will tend most effectually to stimulate the absorbents, and prevent that retardation of bony earth in the lymphatics and vasa vasorum, on which we have already shown the disease to depend in this modification of it.

On the contrary, where it occurs in the middle and vigour of life, and we have reason to believe in the existence of too much action in vessels which we cannot very accurately follow up, a reducent plan will be far more likely to prove successful. We should bleed and move the bowels freely, and restrain the patient to a low diet with a copious allowance of diluent drinks.

And in both cases with a view of dissolving, as far as we are able, the calcareous matter that may morbidly exist in the system already, or be on the point of entering into it, we should prescribe a free use of the mineral or vegetable acids, as already recommended under *PAROSTIA fragilis*.

GEN. V.  
SPEC. II.  
O. im-  
plexa com-  
plicata.  
Complicat-  
ed osthe-  
xy.  
Medical  
treatment.  
Salivation  
of no use:  
where the  
cause is  
debility.

Warmth, &  
generous  
diet, and  
tonic plan  
of medi-  
cines re-  
quisite.

When the  
disease oc-  
curs in the  
middle and  
vigour of  
life, a re-  
ducent plan  
necessary,  
with co-  
pious allow-  
ance of  
diluent  
drinks, a  
free use of  
acids in  
both.



# CLASS VI.

## ECCRITICA.

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### ORDER II.

### CATOTICA.

#### Diseases affecting Internal Surfaces.

PRAVITY OF THE FLUIDS, OR EMUNCTORIES THAT OPEN  
INTO THE INTERNAL SURFACES OF ORGANS.

CLASS VI.  
ORDER II.  
Origin of  
ordinal  
term.

CATOTICA is derived from *κάτω*, “infra,” whence *κατώτερος* and *κατώτατος*, “inferior,” and “infimus.” The order includes four genera as follows, some of which will be found of extensive range :

I. HYDROPS.	DROPSY.
II. EMPHYSEMA.	INFLATION. WIND-DROPSY.
III. PARURIA.	MISMICTURITION.
IV. LITHIA.	URINARY CALCULUS.

## GENUS I.

## HYDROPS.

**Dropsy.**

PALE, INDOLENT, AND INELASTIC DISTENSION OF THE BODY, OR ITS MEMBERS, FROM ACCUMULATION OF A WATRY FLUID IN NATURAL CAVITIES.

HYDROPS is a Greek term (ὑδρῶσις) importing an accumulation of water: and in nosology there is no genus of diseases that has been more awkwardly handled. The term hydrops does not occur in Sauvages, Linnéus, or Sagar, and only once in Vogel in the compound hydrops *scroti*. Linnéus connects anasarca and ascites, its chief species, with tympanites, polysarcia, or corpulency and graviditas or pregnancy, into one ordinal division, which he names TUMIDOSI, and of which these constitute distinct genera. Sagar arranges all the same under the ordinal division CACHEXIÆ. Vogel pursues the same plan with the omission of graviditas or pregnancy, which he does not chuse to regard as a cachexy. Sauvages employs the term *hydropes*, but only in connexion with *partiales*, in order to restrain it to local dropsies: so that with him ascites is a hydrops, but anasarca is not a hydrops, and does not even belong to the same order; it is an *intumescencia*, under which, as in the arrangement of Linnéus, it is united with corpulency, and pregnancy; while hydrops *thoracis* is an *anhelatio*, and occurs in a distinct place and volume.

GEN. I.  
Origin of  
generic  
term.  
Synonyms:

and ex-  
aminations  
of former  
arrange-  
ments.

Dr. Cullen has certainly, and very considerably, improved upon his predecessors in this range of diseases. After Sauvages he takes INTUMESCENTIÆ for the name of his order; but divides it into the four sections of adi-

GEN. I.  
Hydrops.  
Dropsy.

Hydrops  
first em-  
ployed by  
Boerhaave  
in its pre-  
sent scope.

posæ, flatuosæ, aquosæ vel hydropes, and solidæ; while under the third section (the aquosæ vel hydropes) he introduces all the family of dropsies, whether general or local, instead of sending them with those who preceded him, to different quarters. It would, however, have been a much greater improvement, and have added to the simplicity he aimed at, to have employed hydrops as a generic, instead of hydropes as a tribal or family term. It is to Boerhaave we are indebted for the first use of hydrops as employed in the present method; and he has been followed by Dr. Macbride and Dr. Young with a just appreciation of his correctness.

The species of this genus, which extend over the body generally or almost all the different parts of it, are the following:

1.	HYDROPS CELLULARIS.	CELLULAR DROPSY.
2.	——— CAPITIS.	DROPSY OF THE HEAD.
3.	——— SPINÆ.	——— SPINE.
4.	——— THORACIS.	——— CHEST.
5.	——— ABDOMINIS.	——— BELLY.
6.	——— OVARII.	——— OVARY.
7.	——— TUBALIS.	——— FALLOPIAN TUBE.
8.	——— UTERI.	——— WOMB.
9.	——— SCROTI.	——— SCROTUM.

Before we enter upon a distinct view of the history and treatment of these several species, it may be convenient to give a glance at the general pathological principles which apply to the whole.

All dropsies  
from like  
causes.

Predispo-  
nent cause:  
remote  
causes  
numerous.

All dropsies proceed from similar causes, which, as they are general or local, produce a general or local disease. The common predisponent cause is debility. The remote causes are very numerous, and most of them apply to every form under which the disease makes its appearance; for the accumulation of watry fluid which constitutes the most prominent symptom of the malady, may be produced by a profuse halitus from the terminal arteries occasioning too large a supply of that fine lubricating fluid which, as we have observed in the Physiolo-

gical Proem to the present Class, flows from the surface of all internal organs and enables them to play with ease and without attrition upon each other; it may be produced by a torpid or inactive condition of the correspondent absorbents occasioning too small a removal of this fluid, when it has answered its purpose and is become waste matter; or it may be produced by each of these diseased conditions of both sets of vessels, operating at the same time; and it is to this double deviation from healthy action that Dr. Cullen applies the name of an hydropic diathesis.

GEN. I.  
Hydrops.  
Dropsy.

Want of action on the part of the absorbents is, in every instance, the result of debility. Profuse exhalation on the part of the secernents or terminal arteries, in most cases, proceeds from a like cause, for it takes place from a relaxed state of these vessels, which open their mouths too widely, and suffer the serum or other aqueous fluid to escape with too much freedom.

Further  
illustrated.

Dropsy is, in most instances, therefore, a disease of debility; and, if we minutely attend to the histories of those who are suffering from this disease, we shall generally find that they have for some time antecedently, been labouring under debility either general or local: that they are weakened by protracted fevers; or languishing under the effects of an unkindly lying-in; that they have unstrung their frames by a long exposure to a cold and moist atmosphere; or have worn themselves out by hard labour; or, which is still worse, by hard eating and drinking; or that they are suffering from habitual dyspepsy or some other malady of the stomach or chylo-poëtic organs, especially the liver, which destroys or deranges the digestive process, and hence lays a foundation for atrophy. And, for the same reason, innutritious or indigestible food is a frequent cause of some species of this disease\*: as is also great loss of blood from any organ, and especially when such discharge becomes periodical.

Dropsy  
mostly a  
disease of  
debility:  
and the  
nature of  
the debility  
often obvious.  
Sources of  
debility  
enumerated.

\* Obererzgebürgisches Journ. iv. St.



GEN. I.  
Hydrops.  
Dropsy.  
Local debility often produces the same effect as general debility : where the weakened organ strongly sympathizes with the affected exhalants.

Hence torpitude of the chylo-factive viscera a cause from sympathy.

Torpitude of the cutaneous exhalants act in the same manner.

Where the digestive organs are in a very morbid state dropsy may take place as a result of general debility; but it more commonly occurs from that peculiar sympathy which prevails so strikingly between the two ends of the extensive chain of the nutritive, or, in other words, the digestive and assimilating powers, which we had occasion to explain when treating of marasmus\*: the inertness and relaxation of the excernent vessels being, in this case, produced by the torpitude of the chylopoëtic viscera; and the usual forms of dropsy being those of the cellular membrane or of the abdomen. Hence a single indulgence in large draughts of cold drinks, and especially of cold water when the system is generally heated and exhausted has occasionally proved sufficient to produce dropsy in one of these forms; of which we have a striking example in the army of Charles V. during its expedition against Tunis, the greater part of it, as we are told by De Haen, having fallen into this disease in consequence of having freely quenched their thirst with cold water in the midst of great fatigue and perspiration†.

A like sympathy not unfrequently takes place between several other organs and the mouths of the excernents: as the skin and the uterus: the former as loaded with an extension of the same terminal vessels, and the latter as maintaining an influence over almost every part of the frame. It was partly perhaps from sympathy with the skin, and as participating in the chill and consequent collapse of its capillaries produced by the coldness of the beverage, that the excernent system became affected in the extensive dropsy just alluded to in the army of Charles V. And we frequently perceive a similar effect on a sudden suppression or repulsion of cutaneous eruptions, the mouths of the excernent vessels opening into internal cavities partaking of the torpitude of the cutaneous capillaries. The sympathetic influence exercised

\* Vol. II. p. 717. 724.

† Rat. Med. Part v. 38. 90.

over the same vessels by a morbid state of the uterus is not less manifest: for in chlorosis the abdomen becomes tumid, and the lower limbs edematous; and, on the cessation of the catamenia, cellular or abdominal dropsy are by no means uncommon.

Such are the general causes of cellular dropsy as well proximate as predisponent. But there are a few other causes which it is necessary to enumerate as acting occasionally, though the effects produced by some of them can hardly be called dropsy in the proper and idiopathic sense of the term.

In the first place, the absorbents are supposed by some pathologists, as M. Mezler\* and Dr. Darwin, to be at times affected with a retrograde action, and hence to pour forth into various cavities of the body a considerable mass of fluid instead of imbibing and carrying it off. Next, the exhalants of an organ, though themselves in a state of health, may throw forth an undue proportion of fluid in consequence of some stimulus applied to them. The most common stimulus to which they are exposed is distention and that by a retardation of the blood in the veins, and a consequent accumulation in the arteries. This retardation or interruption of the flow of venous blood may arise from diseases of the right ventricle of the heart or its valves; from various affections of the lungs or their surrounding muscles; from an upright posture continued without intermission for many days and nights, as is often the case in monthly nurses; from a gravid uterus, whence the edematous ancles of pregnant women; from scirrhus or other obstructions in the liver or spleen; from polypous concretions in the veins, aneurisms in the arteries, or steatomatous or other hard tumours in the vicinity of the larger arterial trunks.

In some cases inflammation succeeds to distention, and the quantity of fluid poured forth is still more considerable. It is from this double source of stimulus, distention

GEN. I.  
Hydrops.  
Dropsy.  
As also a  
morbid  
state of the  
uterus.

Other sup-  
posed oc-  
casional  
causes:

Retrograde  
motion of  
the ab-  
sorbents.

Stimulus of  
distention  
by a re-  
tardation of  
blood in the  
veins.

Illustrated.

Hence  
dropsy of  
the ven-  
tricles of  
the brain in  
meningic  
cephalitis.

\* Von der Wassersucht.

GEN. I.  
Hydrops.  
Dropsy.

and inflammatory action, that the ventricles of the brain become filled in meninge cephalitis, and the cavity of the pericardium occasionally in carditis.

Rupture of  
the thoracic  
duct, or  
lacteal  
vessels.

Thirdly, the aqueous fluid of a cavity may be unduly augmented, and consequently dropsy ensue, from a rupture of the thoracic duct, or of a large branch of the lacteal vessels. These, however, are not common causes; the lymphatics of the kidneys may, perhaps, most frequently have produced the disease when ruptured by accident or idiopathic affection in the case of renal ischury; during which the watry parts of the blood that should pass off by the kidneys have been thrown back into the system, and lodged in some cavity. And it is probable that when dropsy follows upon long exposure to a cold damp atmosphere, it is produced, in some instances, in the same manner; the fluid that should pass off by the exhalants of the skin, but which cannot in consequence of having lost their power; being, in like manner thrown back into the blood and transferred to and accumulated in improper channels.

Absorption  
of moisture  
from the  
atmos-  
phere:  
Insatiable  
thirst.  
Morbid te-  
nuity of the  
blood.

Fourthly, the skin is said, at times, to be in a condition to absorb moisture too freely from the atmosphere\*; the stomach is said, as in the case of *DIPSOSIS avens*, to demand too large a quantity of liquids to quench its insatiable thirst†; and the blood is said to be in a state of preternatural tenuity from saline acrimony‡; and each of these conditions it is affirmed has occasionally proved a source of dropsy. The first of these unquestionably occurs at times during dropsy, and all of them may have operated as causes: but preternatural tenuity of blood, adequate to and producing such an effect is very uncommon from any cause; and the remedial power of

\* Erastus, Disp. iv. p. 206.

De Haen, Rat. Med. P. iv. p. 125. seq.

† Büchner, Miscell. 1730. p. 888.  
Mondschien, p. 12.

‡ Galen, De Lymph. Caus. Lib. III. cap. 8.  
Van Swieten ad Sect. 1229.

nature is at no loss for means to carry off a superabundance of fluidity introduced by any means into the system, provided the excernent function itself be not diseased.

GEN. I.  
Hydrops.  
Dropsy.

From this diversity of causes we may reasonably expect that the dropsical fluid discharged upon tapping should exhibit different properties, not only in different organs, but in different cases in the same organ. And hence, it is sometimes found nearly as thin as water, incapable of coagulating when exposed to heat, which only renders it turbid; while, at other times, it flows in a ropy state, and accords, upon exposure to heat, with the natural serum of the blood. A similar discrepancy is discoverable in its colour or some other condition; for it has sometimes been found black and fetid\*, bloody, sanious, milky†, green‡, yellowish, or peculiarly acrid§. In some instances it has resembled the glairy ichor of sores in a languid constitution or degenerated habit; and according to Guathani and Steidele it has at times appeared oily||. It has been occasionally so urinous or ammoniacal as to turn syrup of red poppies green¶: and, according to Dr. M'Lacklan, has sometimes contained so much soda as by the addition of sulphuric acid to produce Glauber's salt\*\* with little or no trouble.

Hence the fluid of dropsy very different in different dropsies, in viscosity, coagulability, and colour.

From the nature of the fluid itself, therefore, we have a clear proof that the causes of dropsy must be different in different cases. In augmented secretion, impeded absorption, or the rupture of a lymphatic vessel, the accumulated fluid should contain nothing more than the ordinary constituents of the halitus that naturally moistens the cavity into which it is discharged. A relaxed

The subject further illustrated.

\* Galeazzi, in Com. Bonon. Tom. vi.

† Willis, Pharmaceutice Rationalis.

Med. Com. of Edinb. Vol. v.

‡ Rücker, Comm. Lib. Nor. 1736.

§ Du Verney, Memoirs de Paris, 1701. p. 193.

|| Guat. De Aneurismatibus. Steid. Chirurg. Beobacht. B. I.

¶ De Haen, Rat. Med. P. xi. p. 214.

\*\* Med. Comm. Edinb. ix. ii.



GEN. I.  
Hydrops,  
Dropsy.

state of the exhalants may admit particles of greater bulk, and even red blood: in which case the fluid may differ both in viscosity and colour. While, on the other hand, morbid collections of water must proceed from a cause of a very different nature; probably from the exhalant arteries being themselves so altered by disease as to change the properties of the fluid which passes through them: or the general mass of blood being so attenuate or otherwise vitiated as to affect the secretion. In the last case, dropsy is not a primary disease, but the consequence of some other, generally perhaps of a morbid liver, spleen, or lungs\*.

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### SPECIES I.

## HYDROPS CELLULARIS.

### Cellular Dropsy.

COLD AND DIFFUSIVE INTUMESCENCE OF THE SKIN, PITCHING BENEATH THE PRESSURE OF THE FINGERS.

GEN. I.  
SPEC. I.

THIS species includes three varieties, as it is general to the cellular membrane, limited to the limbs, or accompanied with a combination of very peculiar symptoms, and especially severe, and in most cases fatal, dyspnœa:

- |                 |                                |
|-----------------|--------------------------------|
| α Generalis.    | Extending through the cellular |
| General Dropsy. | membrane of the whole body.    |
| ε Artuum.       | Limited to the cellular mem-   |
| Edema,          | brane of the limbs, chiefly    |
|                 | of the feet and ancles; and    |
|                 | mostly appearing in the even-  |
|                 | ing.                           |

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\* Hewson Descript. of the Lymph. Syst. Ch. xii.

γ Dyspnoica.

Dyspnetic Dropsy.

Edematous swelling of the feet, stiffness and numbness of the joints; the swelling rapidly ascending to the belly, with severe and mostly fatal dyspnoea.

GEN. I.  
SPEC. I.  
Hydrops  
cellularis.  
Cellular  
Dropsy.

It is under the first of these varieties that cellular dropsy usually appears as an idiopathic affection. Where the intumescence is confined to the limbs, it is usually a symptom or result of some other affection, as chlorosis, suppressed catamenia or any other habitual discharge; a disordered state of the habit produced by a cessation of the catamenial flux; repelled eruptions; or the weakness incident upon protracted fevers, or any other exhausting malady.

α H. cellularis generalis.  
General Dropsy.  
β H. cellularis artuum.  
Edema.

The third variety is introduced upon the authority of Mr. W. Hunter, and taken from his Essay, published at Bengal in 1804. The disease appeared with great frequency among the Lascars in the Company's service in 1801. Its attack was sudden and its progress so rapid that it frequently destroyed the patient in two days. From the description it does not seem to have been connected with a scorbutic diathesis: and Mr. Hunter ascribed it to the concurrent causes of breathing an impure atmosphere, suppressed perspiration, want of exercise, and a previous life of intemperance. All or any of these may have been auxiliaries, but the exciting cause does not seem to have been detected.

γ H. cellularis dyspnoica.  
Dyspnetic Dropsy:  
as described by Hunter in Bengal.

The second and third varieties, however, may be regarded as the opening and concluding stages of cellular dropsy: for before the disease becomes general it ordinarily shows itself in the lower limbs, and in its closing scene the respiration is peculiarly difficult and forms one of its most distressing symptoms.

General or local debility is its predisposing cause, ordinarily brought on by hard labour, intemperance, innutritious food, fevers of various kinds, exhausting discharges, or some morbid enlargement of the visceral or thoracic organs that impedes the circulation of the blood, and produces congestion and distension.

General predisponent cause.  
Occasional causes.

GEN. I.  
SPEC. I.  
Hydrops  
cellularis.  
Cellular  
dropsy.  
Disease  
common to  
all ages,  
though  
mostly to  
the old.  
Descrip-  
tion.  
Commence-  
ment.

The disease is hence common to all ages though most frequently found in advanced life; the edema of the feet and ancles, with which symptoms it opens, appears at first only in the evening, and yields to the recumbent position of the night. By degrees it becomes more permanent and ascends higher, till not only the thighs and hips, but the body at large is affected, the face and eyelids are surcharged and bloated, and the complexion, instead of the ruddy hue of health, is sallow and waxy. A general inactivity pervades all the organs, and consequently all their respective functions. The pulse is slow, often oppressed, and always inelastic: the bowels are costive, the urine for the most part small in quantity, and consequently of a deeper hue than usual: the respiration is troublesome and wheezy, and accompanied with a cough that brings up a little dilute mucus which affords no relief to the sense of weight and oppression. The appetite fails, the muscles become weak and flaccid, and the general frame emaciated. Exertion of every kind is a fatigue, and the mind, partaking of the hebetude of the body, engages in study with reluctance, and is overpowered with drowsiness and stupor.

Progress.

An unquenchable thirst is a common symptom; and where this is the case the general irritation that is connected with it sometimes excites a perpetual feverishness that adds greatly to the general debility. In some parts the skin gives way more readily than in others, and the confined fluid accumulates in bags. At other times the cuticle cracks, or its pores become an outlet for the escape of the fluid, which trickles down in a perpetual ooze. The difficulty of breathing increases partly from the overloaded state of the lungs, and partly from the growing weakness of the muscles of respiration: the pulse becomes feebler and more irregular, slight clonic spasms occasionally ensue, and death puts a termination to the series of suffering. Yet the progress is slow, and the disease sometimes continues for many years.

Termina-  
tion.

Medical  
Treatment.

In attempting a cure of cellular dropsy, and indeed of dropsy in general, for it will be convenient to concentrate the treatment, we should first direct our attention to the

nature of its cause with a view of palliating or removing it. We are next to unload the system of the weight that oppresses it. And lastly to re-establish the frame in health and vigour.

Simple edema, or swelling of the extremities is often, as we have already observed, a symptom or result of some other complaint, as chlorosis or pregnancy, or some other cause of distention. In the two last cases it may be palliated by bleeding, a recumbent position, and other means adapted to take off the pressure. In chlorosis it can only be relieved by a cure of the primary affection. In like manner, general dropsy may be dependent upon a habit of intemperance, or a sedentary life, or innutritious food, or an obstinate fit of jaundice; and till these are corrected no medicinal plan for evacuating the accumulated water can be of any avail. For, if we could even succeed in carrying it off, it would again collect, so long as the occasional cause continues to operate.

The occasional cause, however, may no longer exist, as where it has been produced by a fever or an exanthem that has at length ceased though it has left the constitution an entire wreck. Or it may exist and be itself incurable, as where it proceeds from a scirrhus induration or some other obstruction of one of the larger viscera of the thorax or abdomen: and in this case our object should be to remove with all speed the mischievous effects, and palliate the organic cause, as far as we are able, according to its peculiar nature, so that it may be less operative hereafter.

A removal of the accumulated fluid from the cellular membrane generally has been attempted by internal and external means, as hydragogues of various kinds, and scarification or other cutaneous drains.

The HYDRAGOGUES or expellents of water, embrace medicines of all kinds that act powerfully on any of the excretories, though the term has sometimes been limited to those that operate on the excretories of the intestines alone. And it becomes us therefore to contemplate them under the character of purgatives, emetics, diaphoretics, and diuretics.

GEN. I.  
SPEC. I.  
Hydrops  
cellularis.  
Cellular  
dropsy.  
Treatment.  
General  
course to  
be pur-  
sued.  
The cause  
to be re-  
moved or  
palliated  
wherever  
possible.

The mis-  
chievous  
effects to be  
removed;

by internal  
and ex-  
ternal  
means.

Internal  
means.  
Hydra-  
gogues,  
which may  
include  
purgatives,  
emetics, dia-  
phoretics,  
and diu-  
retics.



GEN. I.  
SPEC. I.  
Hydrops  
cellularis.  
Cellular  
dropsy.  
Treatment.

Purgatives  
general and  
supposed to  
be specific.  
General  
purgatives.

The purgatives that have been had recourse to are of two kinds, those of general use, and those that have been supposed to act with some specific or peculiar virtue in the removal of the dropsical fluid.

Among the first we may rank calomel, colocynth, gamboge, scammony, jalap, and several other species of convolvulus, as the greater white bind-weed (*convolvulus Sepium*, Linn.): the turbeth plant (*c. Turpethum*, Linn.): and the brassica *marina*, as it is called in the dispensaries (*c. Soldanella*, Linn.). These may be employed as drastic purgatives almost indiscriminately, and their comparative merit will depend upon their comparative effect, for one will often be found to agree best with one constitution and another with another. We need not here except calomel, unless indeed, where given for the purpose of resolving visceral infarctions; since in any other case it can only be employed in reference to its influence upon the excretories generally, and particularly those of the intestinal canal.

Purgatives  
supposed to  
act speci-  
fically.

The purgatives that have been supposed to operate with a specific effect in dropsies are almost innumerable. We must content ourselves with taking a glance at the following, grana Tiglia, or bastard ricinus; elaterium: elder, and dwarf elder; black hellebore; senega; and crystals of tartar.

Croton  
Tiglium or  
Bastard  
ricinus.

The CROTON *Tiglium*, or bastard ricinus, affording the grana Tiglia of the pharmacopœias, is an acrid and powerful drastic in all its parts, root, seeds, and expressed oil. The oil is of the same character as the oil of castor, but a severer and more acrimonious purge; in-somuch, indeed, that a single drop prepared from the dry seeds is often a sufficient dose; while a larger quantity proves cathartic when rubbed on the navel. In India the seeds themselves have long been given as a hydrogogue; two being sufficient for a robust constitution, one for a weaklier; and four proving sometimes fatal.

Elaterium  
or juice of  
wild cu-  
cumber.

From the uncertainty and violence of the action of this plant, the ELATERIUM or inspissated juice of the wild cucumber, is a far preferable medicine. Elaterium,

however, has been objected to as unduly stimulant; and both Hoffman and Lister observe that its effect in increasing the pulse is perceivable even in the extremities of the fingers. It is on this account that it seems chiefly to have been neglected by Dr. Cullen; who admits that he never tried by itself, or otherwise than in the proportion of a grain or two in composition with other purgatives. And it is hence, also, that attempts have been made to obtain a milder cathartic from the roots of the plant by infusion in wine or water \*, than from the dried fecula of the juice, which is the part ordinarily employed. Admitting the stimulant power here objected to, it would only become still more serviceable in cold and indolent cases from local or general atony; but even in irritable habits in cellular dropsy, I have found it highly serviceable in a simple and uncombined state, produced, as it ultimately appeared, and especially in one instance, from a thickening of the walls of the heart, in a young lady of only thirteen years of age. It is best administered in doses of from half a grain or a grain to two grains, repeated every two or three hours for five or six times in succession according to the extent of its action. Evacuation by the alvine canal is the most effectual of any; nor can we depend upon any other evacuation unless this is combined with it.

The elder tree, and dwarf elder (*Sambucus nigra*, and s. *Ebulus*) have been in high estimation as hydragogues by many practitioners. Every part of both the plants has been used; but the liber or inner bark of the first, and the rob or inspissated juice of the berries of the last, have been chiefly confided in. Dr. Boerhaave asserts that the expressed juice of the former given from a drachm to half an ounce at a dose, is the most valuable of all the medicines of this class, where the viscera are sound; and that it so powerfully dissolves the crasis of the different fluids, and excites such abundant discharges

GEN. I.  
SPEC. I.  
Hydrops  
cellularis.  
Cellular.  
dropsy.  
Treatment.

*Sambucus*  
*nigra* and  
*S. Ebulus*.  
Elder and  
dwarf elder.

\* Bonlduc, Hist, de l' Acad. Royal de Sciences de Paris.

GEN. I.  
SPEC. I.  
Hydrops  
cellularis.  
Cellular  
dropsy.  
Treatment.

that the patient is ready to faint from sudden inanition. Dr. Sydenham confirms this statement, asserts that it operates both upwards and downwards, and in no less degree by urine, and adds, that in his hands it has proved successful in a multitude of hydropic cases\*.

Dr. Brocklesby preferred the interior bark of the dwarf elder†, as Sydenham and Boerhaave did that of the black, or common elder. Dr. Cullen seems to have been prejudiced against both, though he admits that he never tried either, notwithstanding that he had often thought of doing so‡: and it is chiefly, perhaps, from his unfavourable opinion of their virtues, that they seem in our own day to have sunk into an almost total disuse. Chesneau employed indifferently the seeds, and their expressed oil, the root and the inspissated juice of the root: though he preferred the s. *Ebulus* to the s. *nigra* §.

Melam-  
podium or  
Black helle-  
bore.

The melampodium or black hellebore, was at one time a favourite cathartic in dropsies, and has the testimony of high authorities for having very generally proved efficacious and salutary. The ancients found the plant which they employed under this name so severe in its purgative qualities, that they were obliged to use it with great caution; but we have reason to believe that the black hellebore of the present day is a different production, as it is milder in its effects than the hellebore of Dioscorides, and different in some of its external characters. Its root was the part selected, and the fibres of the roots, or their cortical part rather than the internal. These were employed either in a watery infusion or extract. Mondschein || preferred on all occasions, the latter; Quarin used either indifferently ¶.

\* Opp. p. 627, 768.

† Econom. and Med. Observ. p. 278.

‡ Mat. Med. Vol. I. p. 534.

§ Lib. III. Cap. iii. Obs. 8.

|| Von der Wassersucht, &c.

¶ Animadversiones, &c.

Bacher invented a pill which was once in very high reputation, and sold under his own name all over Europe, for the cure of dropsy, in which an extract of this root, obtained, in the first instance, by spirit, formed the chief ingredient; the others being preparations of myrrh and carduus benedictus. These pills were said to produce a copious evacuation both by stool and urine; and by this combined effect to carry off the disease. They have however had their day, and are gone by, apparently with too little consideration upon the subject: for the experiments of Daignau and De Horne, and especially the successful trials in the French Military Hospitals, as related by M. Richard\* to say nothing of Dr. Bacher himself, do not seem to have excited sufficient attention. In our own country, since the days of Dr. Mead, the black hellebore has been limited to the list of emmenagogues, and even in this view is rarely employed at present. Whether this plant prove purgative, as has been asserted, when applied to the body externally in the form of fomentations or cataplasms like the croton, I have never tried. Ferrara, employed as hydragogues, the black and white hellebore indiscriminately.

GEN. I.  
SPEC. I.  
Hydrops  
cellularis.  
Cellular  
dropsy.  
Treatment.  
Bacher's  
pills what?

The seneka or senega (*polygala Senega*, Linn.) was another medicine much in use about a century ago, and reputed to be of very great importance in dropsy, from its combined action upon the kidneys and intestines, and, indeed, all the excretories. It reached Europe from America, where it had been immemorially employed by the Senegal Indians, from whom it derives its specific name, as an antidote against the bite of the rattle-snake. The root of the plant is the part chiefly, if not entirely, trusted to, and this is given in powder, decoction, or infusion. M. Bouvart found it highly serviceable as a hydragogue, but observes that, notwithstanding this effect, it does not of itself carry off the induration or enlargement of infarcted viscera, and ought to be combined

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\* Recueil des Observations de Médecine des Hôpitaux Militaires, &c.  
Tom. II. 4to. Paris.



GEN. I.  
SPEC. I.  
Hydrops  
cellularis.  
Cellular  
dropsy.  
Treatment.

with other means. It was very generally employed by Dr., afterwards Sir Francis Milman, in the Middlesex Hospital, and has again found a place in the *Materia Medica* of the London College. There are unquestionable instances of its efficacy in the removal of dropsy when it has been carried so far as to operate both by the bowels and the kidneys. It has, however, often failed; and, as Dr. Cullen observes, is a nauseous medicine which the stomach does not easily bear in a quantity requisite for success.

Super-tar-  
trate of  
potass or  
creme of  
tartar.

A far more agreeable, if not a more effectual medicine in the case of dropsy, is the super-tartrate of potass, in vernacular language the cream or crystals of tartar. In small quantities and very largely diluted with water, or some farinaceous fluid, it quenches the thirst most pleasantly, and, at the same time, in most cases, proves powerfully diuretic. But it is as a purgative we are to contemplate it at present: and to give it this effect it must be taken in a much larger quantity, never less than an ounce at a dose, and often considerably above this weight. Thus administered it proves powerfully cathartic, and excites the action of the absorbents in every part of the system far more effectually than is done by the influence of any entirely neutral salts. "I need hardly say," observes Dr. Cullen, "that upon this operation of exciting the absorbents, is chiefly founded the late frequent use of the crystals of tartar in the cure of dropsy \*." Dr. Cullen, in this passage, apparently alludes to the practice of his friend Dr. Home, who was peculiarly friendly to its use, and in his *Clinical Experiments* relates twenty cases in which he tried it, and completed a radical cure in fourteen of them, no relapse occurring notwithstanding the frequency of such regressions. The practice, however, is of much earlier date than Dr. Cullen seems to imagine; for Hildanus represents the physicians of his day as at length flying to

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\* *Mat. Med.* ii. 513. 4to. Edit.

it as their sheet anchor, and deriving from it no common benefit \*. On the Continent it has generally, but very unnecessarily, been united with other and more active materials, as jalap, gamboge, or some of the neutral salts, chiefly vitriolated tartar, or common sea-salt; the latter in the proportion of from three to eight drachms of each daily, largely diluted with some common drink †.

GEN. I.  
SPEC. I.  
Hydrops  
cellularis.  
Cellular  
dropsy.  
Treatment.

Another powerful source of evacuation that has often been had recourse to for the cure of dropsy, is Emetics: and, though, little in use in the present day they have weighty testimonies in their favour among earlier physicians. Their mode of action has a resemblance to that of the drastic purgatives; for, by exciting the stomach to a greater degree of secretion, they excite the system generally; and, in fact, far more extensively and more powerfully than can be accomplished by mere purgatives, in some degree from the greater labour exerted in the act of vomiting, but chiefly from the closer sympathy which the stomach exercises over every other part of the system than the alvine canal, or, perhaps, any other organ, can pretend to. In cases of great debility, however, it must be obvious that such exertion would be too considerable, and would only add to the general weakness; and it is on this account chiefly that the practice has been of late years very much discontinued in our own country. It is in consequence of this extensive sympathy of the stomach with every part of the system that emetics have often proved peculiarly serviceable in various local dropsies, especially that of the scrotum when limited to the vaginal sheath, and that of the ovarium, when discovered in an early stage. And from this cause, in combination with powerful muscular pressure, they have often acted with prompt and peculiar efficacy on ascites or dropsy of the abdomen: while

Emetics.

How far  
adviseable.

\* Cent. iv. Obs. 42.

† Medicinisches Wochenblatt, 1781, N. 40.

GEN. I.  
SPEC. I.  
Hydrops  
cellularis.  
Cellular  
dropsy.  
Treatment.  
Diaphore-  
tics have  
occa-  
sionally  
succeeded.

Interesting  
case re-  
lated by  
Baker.

Withering, Percival, and many of the foreign journals\* abound with cases of the cure of ascites by a spontaneous vomiting.

DIAPHORETICS have also been resorted to as very actively promoting the evacuation of morbid fluids; and many instances are related by Bartholet†, Quarin‡ and others, of the complete success of perspiration when spontaneously excited. Tissot tells us that it was by this means Count Ostermann was cured, a very copious sweat having suddenly burst forth from his feet, which continued for a long time without intermission.

In the Medical Transactions there is a very interesting case of an equal cure effected by the same means, in a letter from Mr. Mudge to Sir George Baker. The form of the disease was, indeed, an ascites, but it will be more convenient to notice it here, while discussing the treatment of dropsy generally than reserve it for the place to which it more immediately belongs. The patient, a female of about forty years old, had laboured under the disease for twenty years: the abdomen was so extremely hard as well as enlarged, that it was doubtful whether the complaint was not a *parabysma complicatum*, or physcony of various abdominal organs, and tapping was not thought adviseable. She was extremely emaciated: had a quick, small pulse, and insatiable thirst; voided little urine, breathed with difficulty, and could not lie down in her bed for fear of suffocation. For an accidental rheumatism in her limbs she had four doses of Dover's powder prescribed for her, of two scruples in each dose, one dose of which she was to take every night. The first dose relieved the pain in her limbs, but did nothing more. An hour or two after taking the second dose on the ensuing night she began

\* Sammlung Medicinischen Wahrnehmungen. B. viii. p. 220.  
N. Sammlung, &c. B. viii. p. 114.  
Schulz. Schwed. Abhandlungen, B. xxi. p. 102.

† Apud. Bonet. Polyalth. iv. 47.

‡ Animadversiones, &c.

to void urine in large quantities, which she continued to do through the whole night, and as fast as she discharged the water her belly softened and sunk. The third dose completed the evacuation; and "thus," observes Mr. Mudge, "was this formidable ascites, which had subsisted near twenty years, by a fortunate accident carried off in eight and forty hours." The cure, too, was radical: for the constitution fully recovered itself, and the patient was restored to permanent health.

We may observe from this case that the viscera are not necessarily injured by being surrounded or even pressed upon by a very large accumulation of water for almost any length of time. It should be noticed, also, in connexion with this remark, that the patient before us was not much more than in the middle of life, even at the date of her cure: at which period we have more reason to hope for a retention of constitutional health in the midst of a chronic and severe local disease, than at a later age. And there can be no question that sudorifics will be found more generally successful in establishing a harmony of action between the surface and the kidneys, and produce less relaxation of the system at this than at a more advanced term of life.

But except where there is such a concurrence of favourable points sudorifics can be but little relied upon in the treatment of dropsy, and are rather of use as auxiliaries than as radical remedies. They are also open to the same objection as emetics: they are apt, as Büchner has well observed, to do mischief by relaxing and debilitating\*; and instances are not wanting in which they have very seriously augmented the evil†.

DIURETICS are a far more valuable class of medicines, and there are few of them that operate by the kidneys alone; the intestines, the lungs, and oftentimes the whole

GEN. I.  
SPEC. I.  
Hydrops  
cellularis.  
Cellular  
dropsy.  
Treatment.

Remarks  
on the pre-  
ceding  
case.

Sudorifics  
rarely to  
be relied  
upon ex-  
cept where  
various cir-  
cumstances  
concur in  
their fa-  
vour.

Generally  
relax un-  
duly and  
augment  
the evil.

Diuretics:  
a far more  
valuable  
class of  
medicines.

\* Diss. de diversa Hydropi Medendi Methodo. Hal. 1766.

† Piso, de Morb. ex serosa Coll. Obs. I.



GEN. I.  
SPEC. I.  
Hydrops  
cellularis.  
Cellular  
dropsy.  
Treatment.  
Digitalis or  
fox-glove.  
In high es-  
timation  
with With-  
ering and  
Darwin:  
Leaves in  
the form  
of decoc-  
tion.

In the  
hands of  
Sir George  
Baker of  
doubtful  
efficacy and  
sometimes  
michievous.  
Generally  
injures  
more by its  
depressive  
power than  
assists by  
its diuretic,  
and often  
loses its  
diuretic  
virtue by  
repetition.  
In the form  
of pill.

surface of the body, internal as well as external, usually participating in their action.

Of diuretics, the most powerful, if not the most useful, is foxglove. It was in high estimation with Dr. Withering, and Dr. Darwin regards it almost as a specific in dropsies of every kind; though he admits that it does not succeed so certainly in evacuating the fluid from the abdomen, as from the thorax and limbs. The preparation usually employed by the latter was a decoction of the fresh green leaves, which, as the plant is a biennial, may be procured at all seasons of the year. Of these he boiled four ounces in two pints of water till only one pint remained; and added two ounces of vinous spirit after the decoction was strained off. Half an ounce of this decoction constituted an ordinary dose, which was given early in the morning and repeated every hour from three to eight or nine doses, or till sickness or some other disagreeable sensation was induced. In the hands of Sir George Baker, even when used in the form recommended by Dr. Darwin, its success was, occasionally, very doubtful; while in some cases it was highly injurious without the slightest benefit whatever\*. Even where it acts very powerfully as a diuretic, and carries off five or six quarts of water a day, it often excites such incessant nausea, sinking, giddiness, and dimness of sight, and such a retardation and intermission of the pulse, that the increased evacuation by no means compensates for the increased debility. And by a repetition it is often found to lose even its diuretic effects.

In the powder made into pills it seems to operate with an equal uncertainty. It has sometimes produced a radical cure without any superinduced mischief: but in other cases it has been almost or altogether inert. Sir George Baker gives an instance of this inertness both

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\* Medical Transactions, Vol. III. Art. XVII.

in the decoction and in pills. In a trial with the former the dose was six drachms every hour for five successive hours during two days, through the whole of which it had not the least efficacy, not even exciting nausea. In a trial with the latter, three pills, containing a grain of the powder in each, were given twice a day for several days in succession. They gave no relief whatever; nor produced any other effect than giddiness and dimness of sight.

GEN. I.  
SPEC. I.  
Hydrops  
cellularis.  
Cellular  
dropsy.  
Treatment.

It is not wonderful, therefore, that the fortune of fox-glove should have been various: that at one time it should have been esteemed a powerful remedy, and at another time been rejected as a plant *totâ substantiâ venenosa*. Its roots have been tried as well as its leaves; and apparently with effects as variable but less active. It seems to have been first introduced into the London Pharmacopœia in 1721—*folia, flores, semen*; was discarded in the ensuing edition of 1746, and has since been restored in its *folia* alone: having encountered a like alternation of favour and proscription in the Edinburgh College. It is greatly to be wished that some mode or management could be contrived, by which its power of promoting absorption might be exerted without the usual accompaniment of its depressive effects. When recommended so strenuously by such characters as Dr. Darwin, and more particularly Dr. Withering, from a large number of successful cases, it is a medicine which ought not lightly to be rejected from practice, and should rather stimulate our industry to a separation of its medicinal from its mischievous qualities. Upon the whole, the singular fact first noticed by Dr. Withering seems to be sufficiently established that in all its forms it is less injurious to weakly and delicate habits than to those of firmer and tenser fibres\*.

Effect of  
its roots.

General result of its  
supposed  
powers.

Less injurious to delicate habits than tenser fibres.

The most useful of the diuretic class of medicines is the siliquose and alliaceous tribes; particularly the latter,

Siliquose  
and alliaceous  
plants.

\* Essay on Digitalis, p. 189.

GEN. I.  
SPEC. I.  
Hydrops  
cellularis.  
Cellular  
dropsy.  
Treatment.  
Squill.

comprising leeks, onions, garlic, and especially the squill. The last is always a valuable and important article, and Sydenham asserts that he has cured dropsies by this alone. It has the great advantage of acting generally on the secernent system, and consequently of stimulating the excretories of the alvine canal as well as those of the kidneys. It sometimes, indeed, proves a powerful purgative by itself; but is always an able associate with any of the cathartics just enumerated. It may be given in any form, yet its disgusting taste points out that of pills as the least incommodious.

When intended to act by the kidneys alone, Dr. Cullen advises that it should be combined with a neutral salt; or, if a mercurial adjunct be preferred, with a solution of corrosive sublimate, which seems to urge its course to the kidneys quicker and more completely than any other preparation of mercury \*. It may, also, be observed that the dried squill answers better as a diuretic than the fresh; the latter as being more acrimonious, usually stimulating the stomach into an increased excitement, which throws it off by stool or vomiting, too soon for it to enter into the circulating system.

Colchicum  
autumnale,  
or meadow-  
saffron.

The colchicum *autumnale*, or meadow-saffron, ranks next, perhaps, in point of power as a diuretic, and is much entitled to attention. It is to the enterprising spirit of Dr. Storer that we are chiefly indebted for a knowledge of the virtues of this plant, whose experiments were made principally on his own person. The fresh roots, which is the part he preferred, are highly acrid and stimulating; a single grain wrapped in crumb of bread and taken into the stomach, excites a burning heat and pain both in the stomach and bowels, stranguary, tenesmus, thirst, and total loss of appetite. And even while cutting the roots, the acrid vapour that escapes, irritates the nostrils and fauces; and the substance held in the fingers, or applied to the tip of the tongue,

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\* Mat. Med. Vol. II. Part. II. Ch. xxi.

so completely exhausts the sensorial power, that a numbness or torpitude is produced in either organ, and continues for a long time afterwards. According to Stoerck's experiments this acrimony is best corrected by infusion in vinegar; to which he afterwards added twice the quantity of honey \*. In the form of an acetum, and of the strength he proposed, it is given as a preparation in the extant London Pharmacopœia, while most of the other colleges have preferred his oxymel. Stoerck used it under both forms, but, perhaps, the best preparation is the wine, as recommended by Sir Everard Home in cases of gout, depurated from all sediment, as already noticed under the latter disease. Stoerck began with a drachm of this twice a-day and gradually increased it to an ounce or upwards. Hautesierk asserts that it is less efficacious than the oxymel of squills †.

GEN. I.  
SPEC. I.  
Hydrops  
cellularis.  
Cellular  
dropsy.  
Treatment.

The other diuretics, in common use, are of less importance; though many of them may be found serviceable auxiliaries as they may easily enter into the dietetic regimen. These are the sal diureticus, or acetate of potash, which very slightly answers to its name, unless given in a quantity sufficient to act at the same time as an aperient; nitrous ether; juniper-berries, broom-leaves, and which is far better, broom-ashes; or either of the fixed alkalies; and the green lettuce, *lactuca virosa*, strongly recommended by Dr. Colin of Vienna, but as far as it has been tried in this country far beyond its merits. Dr. Collin, however, asserts that out of twenty-four dropsical patients he cured by this medicine all but one.

To this class of remedies we have yet to add dandelion (*Leontodon taraxacum*, Linn.) and tobacco. The former of these was at one time supposed to act so powerfully and specifically on the kidneys as to obtain the name of *lectimin-ga*; and is said by some writers to have effected a cure in ascites after every other medicine had failed. It is truly

\* Libellus de Radice Colchice autumnali. Vindob. 1763. 8vo.

† Recueil. II.



GEN. I.  
SPEC. I.  
Hydrops  
cellularis.  
Cellular  
dropsy.  
Treatment.  
Gratiola  
officinalis,  
or hedge-  
hyssop.

wonderful to see how very little of this virtue it retains in the present day, so as to be scarcely worthy of attention : while with respect to tobacco, notwithstanding the strenuous recommendation of Dr. Fowler, it is liable to many of the objections already started against fox-glove.

The *gratiola officinalis* or hedge-hyssop, was once extensively employed, both in a recent state of its leaves and in their extract, and like many other simples, it appears to have been injudiciously banished from the *Materia Medica*. In both forms it is a powerful diuretic, and often a sudorific; and in the quantity of half a drachm of the dry herb, or a drachm of infusion, whether in wine or water, it becomes an active emetic and purgative. It is said to have been peculiarly useful in dropsies consequent upon parabsma, or infarction of the abdominal viscera; and in such cases seems still entitled to our attention. As a strong bitter, it may, like the *lactuca virosa*, which is also a strong bitter, possess some degree of tonic power, in connexion with its diuretic tendency. The bitter, however, is of a disagreeable and nauseating kind, which it is not easy to correct.

External  
means of  
evacuating  
the fluid of  
cellular  
dropsy.  
Blisters,  
setons, and  
scarifica-  
tion.  
The last  
most effec-  
tual, but  
commonly  
deferred to  
too late a  
period.

The EXTERNAL MEANS of evacuating the fluid of cellular dropsy are blisters, setons, or issues, punctures, and scarification. The last is as much less troublesome as it is usually most effectual. It is, however, commonly postponed to too late a period, under an idea that sloughing wounds may be produced by the operation, difficult of cure, and tending to gangrene. In blistering this has often happened, but in scarifying the fear is unfounded, while any degree of vital energy remains: and it should never be forgotten that the longer this simple operation is delayed, the more the danger, whatever it may be, is increased. I have never experienced the slightest inconvenience from the practice; and have rarely tried it without some advantage; seldom indeed without very great benefit. The wound should be limited to a small crucial incision, resembling the letter T on the outside of each knee, as the most dependent organ, a little below the joint. The cut thus shaped, and very slightly pene-

Mode of  
operating.

trating into the cellular membrane will not easily close, and consequently the discharge will continue without interruption. In a young lady about twelve years of age, whom the author lately attended, apparently labouring under an affection of the liver, but whose enormous bulk of body as well as of limbs prevented all accuracy of examination, a common jack-towel applied to each leg after the incision was made, was completely wetted through and obliged to be changed every three or four hours, for as many days. She was also purged with small and frequently repeated doses of elaterium : and the quantity of fluid hereby drawn off at the same time by the intestines is scarcely credible. The whole system was evacuated in about a week ; and the entire figure re-acquired as much elegance of shape and elasticity, as before the attack. She was of a lively disposition and fond of dancing ; in which exercise she engaged with as much energy and vivacity as ever. Nearly a twelvemonth afterwards the disease returned : but the same means were not successful. The breathing was now affected, and there was great palpitation of the heart ; so frequent and distressing indeed as to render her incapable of sleeping for a moment unless in an upright position. The patient in a few weeks fell a victim to the disorder ; and on examining the body, the liver and lungs were found perfectly sound : but the heart was enlarged to nearly double its natural size, and particularly on the right side.

During the progress of hydropic accumulation there is great dryness of the tongue, and, as already observed, an almost intolerable thirst. And the question has often been agitated, whether under these circumstances the patient's strong desire to drink should be gratified. In a state of health it is well known, that whatever be the quantity of fluid thrown into the blood it remains there but a short time, and passes off by the kidneys, so that the balance is easily restored : and hence it is obvious that one of the most powerful, as well as one of the simplest diuretics in such a state, is a large portion of diluent drink. But dropsy is a state very far removed

GEN. I.  
SPEC. I.  
Hydrops  
cellularis.  
Cellular  
dropsy.  
Treatment.  
Illustration  
of the bene-  
fit of sca-  
rification.

Whether  
the sym-  
ptom of  
great thirst  
should be  
indulged.

GEN. I.  
SPEC. I.  
Hydrops  
cellularis.  
Cellular  
dropsy.  
Treatment.  
On what  
ground  
such in-  
dulgence  
has been  
refused.

But the re-  
fusal found-  
ed on false  
principles.  
Patient  
may be al-  
lowed to  
gratify his  
desire;  
and why.

The sur-  
face of the  
body under  
the irrita-  
tion of  
thirst ab-  
sorbs more  
moisture  
from the  
atmosphere  
than would  
serve to  
quench the  
thirst in  
dropsy.

Moisture  
absorbed  
from the air  
by the lym-  
phatics of  
the skin in  
a state of  
health.

from that of health; and in many cases a state in which there is a peculiar irritability in the secernents of a particular cavity, or of the cellular membrane generally, which detracts the aqueous fluid of the blood from its other constituents and pours it forth into the cavity of the morbid organ. And hence it has been very generally concluded, that the greater the quantity of fluid taken into the system, the greater will be the dropsical accumulation: and consequently that a rigid abstinence from drinking is of imperative necessity.

Sir Francis Milman, however, has very satisfactorily shown, that if this discipline be rigidly enforced a much greater mischief will follow than by perhaps the utmost latitude of indulgence. For, in the first place, whatever solid food is given, unless a due proportion of diluent drink be allowed, it will remain in an hydropic patient, a hard, dry, and indigested mass in the stomach, and only add a second disease to a first. And next, without diluting fluids, the power of the most active diuretics will remain dormant: or rather they will irritate and excite pyrexia instead of taking their proper course to the kidneys. And, once more, as the thirst and general irritation and pyretic symptoms increase, the surface of the body, harsh, heated, and acrid, will imbibe a much larger quantity of fluid from the atmosphere than the patient is asking for his stomach; for it has been sufficiently proved, that, under the most resolute determination not to drink, a hundred pounds of fluid have in this manner been absorbed by the inhalants of the skin, and introduced into the system in a few days, and the patient has become bulkier to such an extent in spite of his abstinence.

Even in a state of health or where no dropsy exists we are in all probability perpetually absorbing moisture by the lymphatics of the skin. Professor Home found himself heavier in the morning than he was just before he went to bed in the preceding evening, though he had been perspiring all night, and had received nothing either by the mouth or in any other sensible way.



"That the surface of the skin," says Mr. Cruikshank, "absorbs fluids that come in contact with it, I have not the least doubt. A patient of mine, with a stricture in the esophagus, received nothing either solid or liquid into the stomach for two months: he was exceedingly thirsty, and complained of making no water. I ordered him the warm-bath for an hour morning and evening, for a month: his thirst vanished, and he made water in the same manner as when he used to drink by the mouth, and when the fluid descended readily into the stomach\*."

Under these circumstances, therefore, our first object should be to determine by measurement whether the quantity of fluid discharged by the bladder holds a fair balance with that which is received by the mouth: and if we find this to be a fact, and so long as it continues to be a fact, we may fearlessly indulge the patient in drinking whatever diluents he may please, and to whatever extent. In some cases, indeed, water alone, when drunk in large abundance, has proved a most powerful diuretic, and has carried off the disease without any other assistance, of which a striking instance occurs in Panarolus†; and hence Pouteau‡ occasionally advised it in the place of all other aliment whatever: as does also Sir George Baker, in a valuable article upon this subject in the Medical Transactions§, in which he forcibly illustrates the advantage of a free use of diluent drinks, by various cases transmitted to him, in which it operated a radical cure, not only without the assistance of any other remedy, but, in one or two instances, after every medicine that could be thought of had been tried to no purpose.

But the fluid discharged from the kidneys may not be equal, nor indeed bear any proportion to what is introduced by the mouth, and we may thus have a manifest

GEN. I.  
SPEC. I.  
Hydrops  
cellularis.  
Cellular  
dropsy.  
Treatment.

Advanta-  
geous  
to know  
whether the  
quantity  
discharged  
by the  
kidneys  
balances  
what is  
taken by  
the mouth.  
Disease  
has been  
cured by  
drinking  
water alone.

Hence  
fluids may  
be swallow-  
ed even  
when the  
kidneys do  
not dis-  
charge as  
much as is  
drunk.

\* Anat. of Absorb. Vessels, p. 108. 4to. 1790.

† Pentec. II. Obs. 24.

‡ Oeuvres Posthumes 1790.

§ Vol. II. Art. xvii.



GEN. I.

SPEC. I.

Hydrops

cellularis.

Cellular

dropsy.

Treatment.

In this case

the com-

mon diet-

drink

should be

combined

with saline

or acidulous

diuretics.

Creme of

tartar.

Decoction

of sorrel

leaves.

Sage-tea

with lemon

juice.

Small stale

table-beer.

Cyder.

proof that a considerable quantity of the latter is drained off into the morbid cavity. Still we must not entirely interdict the use of ordinary diluents, nor suffer the patient to be tormented with a continued and feverish thirst. If simple diluent drinks will not pass to the kidneys of themselves, it will then be our duty to combine them with some of the saline or acidulous diuretics we have already noticed, which have a peculiar tendency to this organ; and we shall generally find, that in this state of union they will accompany the diuretic ingredients, and take the desired course. Of these, one of the most effectual, as well as the most pleasant, is creme of tartar; and hence this ought to form a part of the ordinary beverage in all extensive dropsies, and especially the cellular and abdominal. Any of the vegetable acids however may be employed for the same purpose: as may also rennet-whey, and butter-milk, and the more acid their taste the better will they answer their end. A decoction of sorrel-leaves makes also a pleasant diet drink for an hydropic patient; as does likewise an aqueous infusion of sage leaves with lemon-juice: both sweetened to the taste. Small stale table-beer, and weak cyder, or cyder intermixed with water, may in like manner be allowed, with little regard to measure. And it was by the one or other of these that most of the cures just referred to, as related by Sir George Baker, were effected. In one instance the cyder was new, yet it proved equally salutary under the heaviest prognostics. The patient was in his fiftieth year; his legs and thighs had increased to such a magnitude that the cuticle cracked in various places; he was extremely emaciated, and so enfeebled as not to be able to quit his bed, or return to it without assistance. His thirst was extreme, his desire for new cyder inextinguishable, and his case being regarded as desperate it was allowed him mixed with water. He drank it most greedily, seldom in a less quantity than five or six quarts a-day; and by this indulgence discharged sixteen or eighteen quarts of urine every twenty-four hours till the water was totally drained off; and he obtained a radical

cure without any other means whatever. Even ardent spirits, if largely diluted, and joined with a portion of vegetable acid, have been found to stimulate the kidneys; and in the opinion of Dr. Cullen may make a part of the ordinary drink\*. And it is chiefly owing to the tendency which the neutral salts have to the kidneys, as their proper emunctory, and the sympathy which the secernents of these organs maintain with those of all others, that the cure of dropsy has sometimes been effected by large draughts of sea-water alone; though sometimes this has also acted upon the bowels, and produced the same salutary result, by exciting a very copious diarrhœa, of which a striking example is given by Zacutus Lusitanus†.

It should never, however, be forgotten, that dropsy is a disease of debility, and that the plan of evacuating will rarely of itself effect a cure; and never, perhaps, except in recent cases, and where little inroad has been made upon the constitution. In all other cases it should be regarded as a preparatory step alone; a mere palliative; and an evil in itself; though an evil of a less kind to surmount an evil of a greater. And it is for want of due attention to this fact, that the plan of evacuating, and particularly by drastic purgatives, has by many practitioners been carried to a dangerous and even a fatal extreme. Every purgative that does not diminish the general bulk, adds to the general disease by increasing the debility: and if upon a very few trials the plan be not found to answer this salutary purpose it cannot too soon be desisted from.

The radical cure must, after all, depend upon invigorating the constitution, or the organs particularly affected: for even a total removal of the water affords nothing more than a palliative and present relief.

Such an intention may often, indeed, be combined with that of evacuating the fluid; and hence Mondschein

GEN. I.  
SPEC. I.  
Hydrops  
cellularis.  
Cellular  
dropsy.  
Treatment.  
Ardent  
spirits di-  
luted and  
with vege-  
table acids.

Sea-water.

Tonic plan  
of medicine  
to com-  
bine :  
since that  
of evacuat-  
ing is only  
palliative  
and pre-  
paratory.

Such a  
combina-  
tion may  
take place  
from the  
first.

\* Mat. Med. II. 549.

† Prax. Hist. Lib. VIII. Obs. 53.

GEN. I.  
SPEC. I.  
Hydrops  
cellularis.  
Cellular  
dropsy.  
Treatment.  
Bitters,  
their pecu-  
liar adap-  
tation to  
cases of  
dropsy.

with great reason advises us to employ bitters with diuretics \*, as Martius does with purgatives †.

Bitters, indeed, where the debility does not depend upon visceral obstructions, form one of the most efficacious tonics we can employ. They are peculiarly adapted to that general loss of elasticity in the whole system and that laxity of the exhalants which constitutes the hydropic diathesis. "It has been alleged," says Dr. Cullen, "that bitters sometimes act as diuretics. And as the matter of them appears to be often carried to the kidneys, and to change the state of the urine, so it is possible that in some cases they may increase the secretion: but in many trials we have never found their operation in this way to be manifest, or at least to be any ways considerable. In one situation, however, it may have appeared to be so. When in dropsy bitters moderate that exhalation into the cavities which forms the disease, there must necessarily be a greater proportion of serum carried to the kidneys: and thereby bitters may, without increasing the action of the kidneys, seem to increase the secretion of urine ‡."

Balsamics  
and aroma-  
tics.  
Metallic  
oxydes.

To bitters have been added the warmer balsamics and aromatics, and by many physicians the metallic oxydes; chiefly the different preparations of copper; though Willis, Boerhaave, Bonet, and Digby, have occasionally preferred those of silver. Iron has generally been abstained from as too heating, though recommended by Grieve §, Richard ||, and Rhumelius ¶.

Mercury in  
visceral ob-  
structions.

Where the disease is evidently dependent upon some visceral obstruction, mercury offers a fairer chance of success than any other metal; and in this case has often

\* Mondschein, p. 82.

† Martius, Obs. 54.

‡ Mat. Med. II. p. 58.

§ Med. Com. Edinb. IX. II. 75.

|| Journ. de Med. XXIX. 140.

¶ Medic. Spagyr. tripart. p. 168.

been pushed to salivation with the most salutary result. Du Verney employed it to this extent in an ascitic patient, whom at the same time he tapped; and by this double plan effected a cure; allowing a regimen of wine and stimulant meals during the process \*. And Rahn assures us, that in one case, the disease, though it several times recurred, was in every instance put to flight by a ptyalism excited by mercurial inunction †. But where the system is in a state of great general debility, such a solution of the fluids will only add to the weakness and increase the disease. Small doses of calomel steadily persisted in will be here our safest course, with a nutritious and generous diet of flesh-meat two or even three times à day; shell-fish; eggs; spice, and the acrid vegetables, as celery, water-cresses, raw red cabbage shred fine, and eaten as sallad.

I have dwelt the longer on this species because the general observations which it suggests, as well in respect to its causes and history as to its mode of treatment, apply in a very considerable degree to all the rest; concerning which we shall now have little more to do than to enumerate them and point out their distinctive characters.

GEN. I.  
SPEC. I.  
Hydrops  
cellularis.  
Cellular  
dropsy.  
Treatment.  
How far  
ptyalism  
may be  
allowed.

These remarks applicable to most of the ensuing species, and to be borne in mind.

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\* Mem. de Paris, 1703, p. 174.

† Medic. Briefwechsel, B. I. 365.



## SPECIES II.

## HYDROPS CAPITIS.

**Dropsy of the Head. Water in the Head.**

EDEMATOUS INTUMESCENCE OF THE HEAD: THE SUTURES  
OF THE SKULL GAPING.

GEN. I.  
SPEC. II.  
Disease  
often con-  
founded  
with  
meningic  
inflamma-  
tion of the  
brain;

or that  
called  
acute or in-  
ternal hy-  
drocephalus.  
The two  
diseases  
duly discriminated by  
Cullen:  
but the  
latter im-  
properly  
called by  
him an  
apoplexy.  
Dropsy of  
the head  
chiefly  
common to  
children:  
but some-  
times  
found in  
adult age.

THIS disease has been strangely confounded by nosologists and practical writers with that inflammation of the brain which apparently commences in its substance or lower part, and, producing effusion into the ventricles, distends them, and thus unites the symptoms of fever and great irritability with those of heaviness, and at length of stupor. The accumulation of fluid is here only an effect, and follows upon inflammation of the brain as in any other part, and is only to be removed by removing the inflammation. It is ordinarily denominated, however, acute or internal hydrocephalus; but Dr. Cullen has correctly distinguished it from proper hydrocephalus or dropsy of the head by placing it in a different part of his classification, and assigning it a different name. In his view it is an apoplexy, and he has hence called it *apoplexia hydrocephalica*. In the present work it occurs under the name of *CEPHALITIS profunda*, and in treating of it as a cephalitis the author has submitted his reasons for not regarding it as an apoplectic affection.

The disease before us is common to children. A few singular cases are, indeed, recorded of its commencing in adult age\*, and producing an enlargement of the skull by a morbid separation of the sutures, but these are very rare. That it does, however, occur without such separa-

\* Hildan. Cent. III. Obs. 17. 19.

tion and enlargement, and that too occasionally in every period of life, has been proved by a multitude of examinations after death, that have shown the ventricles of the brain distended with fluid, and producing a considerable pressure upon the brain. Yet where no such enlargement of the skull takes place, we may sometimes strongly suspect the disease from the symptoms, but cannot during the life of a patient speak with certainty upon the subject.

Dropsy of the head, like that of every other organ, is a disease of debility, and as we have already observed in the introductory remarks to the present genus, may proceed from a relaxed condition of the secernents of the brain, a torpitude of its absorbents, or from both. The causes of this morbid state we are rarely able to ascertain: yet in some families there seems to be a peculiar predisposition to it, since it occurs in many of the children born in succession: and it may sometimes be connected with a scrophulous diathesis.

The immediate seat of the dropsy varies considerably: for sometimes the fluid accumulates between the bones of the cranium and the dura mater; sometimes between the dura mater or the other membranes and the brain, and sometimes in the ventricles or convolutions of the organ. With the deficiency of tone there is also not unfrequently some deficiency of structure or substance: and it is in consequence of this that the fluid when morbidly secreted or collected in one part, spreads without resistance to another. A deficiency of structure or substance is sometimes found in the brain itself and sometimes in the cranium. If it occur in the former a path may be immediately opened for the morbid fluid, accumulated in the ventricles or in any other interior part, to reach the membranes and distend the skull: and if in the latter, it may even pass beyond the skull, and separate and distend the integuments. I have seen instances of large perforations produced in different parts of the bones by a morbid absorption of the bony earth, as though the trephine had been repeatedly applied, and this too in adult age: and in some instances there has

GEN. I.  
SPEC. II.  
Hydrops  
capitis.  
Dropsy of  
the head.  
Water in  
the head.

Like other  
dropsies, a  
disease of  
debility:

but the  
causes of  
the local  
weakness  
rarely ca-  
pable of  
being  
traced.

Seat of the  
dropsy  
varies con-  
siderably:  
Illustrated.

Often con-  
nected with  
a deficiency  
of structure  
or sub-  
stance in  
the brain or  
the bones of  
the cra-  
nium.

GEN. I.  
SPEC. II.  
Hydrops  
capitis.  
Dropsy of  
the head.  
Water in  
the head.

Dropsical  
fluid said to  
originate  
sometimes  
between the  
integu-  
ments and  
the bone,  
and to be  
confined to  
this quar-  
ter: whence  
external  
and inter-  
nal dropsy  
of the head.  
Such accu-  
mulation  
may take  
place but is  
very rare;  
and even  
then be-  
comes  
rather a  
modifica-  
tion of  
cellular  
dropsy  
than pro-  
per dropsy  
of the head.  
Whether  
Celsus  
alludes to  
such a mo-  
dification.

been a total absence of the calvaria\*. Generally speaking, there is some deficiency of bony earth, as though it were impossible for this secretion to keep pace with the enlargement of the cranium: and hence the bones of the cranium have occasionally been so thin as to be pellucid and transmit the light of a candle, of which Van Swieten gives an instance †, from Betbeder ‡; or have had their place supplied by a membrane covering the entire range of the sinciput, an example of which will be found in Vesalius §.

The dropsical fluid is also said by many writers of high authority to originate in some cases between the integuments and the bone, and to be confined to this quarter: and hence, the disease has been divided into external and internal dropsy of the head. It is possible, indeed, as Van Swieten has justly observed, that since water may be collected in the cellular membrane of the whole body, such an accumulation may take place in the integuments of the head ||. But the pretended cases are so rare that Van Swieten himself, Petit ¶, and many other writers of high credit, have doubted whether such a form of the disease has ever actually occurred. Yet, should it occasionally take place, there can, I think, be no question that it ought rather to be regarded as a variety of anasarca or cellular dropsy, than hydrocephalus or dropsy of the head properly so called. Celsus has been quoted upon the occasion as confirming the existence of this external modification, and applying to it the name of hydrocephalus: but this is to misunderstand him egregiously. In the passage referred to he is speaking of internal diseases of the head alone, of cephalæa, and other aches produced by wine, or indigestion, by cold, or

\* Act. Helvet. i. 1.

† Comment. in Hydróp. Sect. 1217.

‡ Histoire de l'Hydrocephale de Begle, p. 35.

§ De Corp. human. fabricâ. Lib. i. cap. 5.

|| Comment. loc. citat. 1718.

¶ Academ. des Sciences, Mem. p. 121.

heat or the rays of the sun, sometimes accompanied with fever, and sometimes without; sometimes affecting the whole of its interior, and sometimes only a part:—"modo IN TOTO CAPITE, modo IN PARTE." And he then adds, "præter hæc etiamnum invenitur genus, quod potest longum esse: ubi humor cutem inflat, eaque intumescit, et, prementi digito, cedit: ὑδροκέφαλον Græci appellant\*." It is manifest, therefore, that the hydrocephalus here noticed, like the other diseases with which it is associated, is an internal affection of the head: and this idea is still farther confirmed by the treatment which he shortly afterwards proceeds to prescribe for it.

It is hence highly probable that the cases which have been called external dropsies of the head, have consisted of internal accumulations spreading to and distending the integuments through channels that were not ascertained, and on this account not supposed, to exist.

Were the distinctions of external and internal dropsy of the head necessary to be preserved, it would be far more accurate to limit the former to those modes of the disease in which the water is confined between the calvaria and the membranes, and the latter to those in which it originates in the cavities of the brain: but as we can rarely, if ever, determine the limits of the collection by the symptoms, it is a distinction which cannot be supported, and would often lead us into error.

Hydrops capitis frequently commences in the fetus, and sometimes renders the head so large as to retard the labour, and greatly harass the delivery. Blanchard gives a case in which four pounds of water were evacuated from the head of a fetus after its birth. At other times it does not show itself till some months, or even two or three years, after birth. In most cases the whole head enlarges gradually by a gradual separation of the sutures; but in a few cases the first symptom has been a small, elastic tumour on the upper part of the head, produced by an

GEN. I.  
SPEC. II.  
Hydrops  
capitis.  
Dropsy of  
the head.  
Water in  
the head.

Hence  
what have  
been called  
external  
dropsies,  
most pro-  
bably ac-  
cumula-  
tions com-  
mencing  
within.  
A proper  
distinction  
might be  
drawn if  
necessary,  
and of ad-  
vantage:  
but can  
never be  
definite or  
of real use.  
Dropsy of  
the head  
often found  
in the fetus.  
Illustrated.

\* De Medicin. Lib. iv. cap. ii.



GEN. I.  
SPEC. II.  
Hydrops  
capitis.  
Dropsy of  
the head.  
Water in  
the head.

inequality of the dura mater, and its yielding more readily at the part that presents, than in any other quarter. This tumour sometimes grows to a size as large as the head itself. It is seldom, however, that the walls of the tumour burst; for the uniform pressure to which they are exposed, has a tendency to thicken and harden them. And hence, as the resistance increases, the sutures give way generally, and the tumour frequently disappears and is lost in the general swell.

If the local debility be confined to the excrement vessels of the brain, and the secretion be slow, the disease may proceed without much interference with the mental or corporeal powers: and has hence lasted upwards of thirty years. Exemplified.

The brain often exhibits, as we have already observed, some misformation or defect, which of itself may constitute a remote cause: but the proximate cause is a debility of the local secernents, absorbents, or both. If the debility be confined to these, or the defect in structure do not interfere with the proper developement of the mental or corporeal powers of the sensorium, the infant may live and even thrive in every other part, while the water continues to accumulate and the head to become more monstrous, and even insupportable from its own weight: for, provided the pressure applied be very gradual, and unaccompanied with inflammation, the brain, like the stomach and intestines in dropsy of the belly, may be drowned in water for even twenty or thirty years without serious mischief. Michaelis relates the case of a patient twenty-nine years old, whose appetite and memory were good, and the pupils of the eyes natural, though the disease had continued from birth\*. And in treating of vascular osthexy I had occasion to notice, from Dr. Herberden, the history of a patient who, with about eight ounces of water in the ventricles of the brain, as appeared on opening him,—and which there was good reason for believing had existed there for many years,—and with scarcely an organ free from disease in his whole body, with the exception of the brain itself, which was found healthy in its substance, was enabled to attain the good old age of upwards of fourscore years with an apparently

\* Medical Communications; Vol. I. Art. xxv.

sound constitution, and free from all the usual infirmities of advancing years, saving the inconvenience of an habitual deafness.

But the torpitude or imbecility of the excernent vessels may extend to the other parts of the brain, and to parts that are immediately connected with the mental faculties; or the defects of structure that are so often combined with dropsy of the head may extend to the same: and in such cases the hearing, sight, or speech may be affected: there may be loss of memory or stupidity, vertigo, epilepsy, or convulsion fits. The brain has sometimes been found in a spongy or fungous state\*; or otherwise disorganized†: and sometimes tense and slender with nerves like mucus‡. The fluid, moreover, may accumulate with rapidity, instead of slowly, as soon as the exciting cause, whatever it may be, is in operation, and the suddenness of the pressure may impede the action of the sanguiferous vessels; and we shall then perceive symptoms of compression, as a heavy pain in the head, stupor, occasional vomiting, quick pulse, and other febrile concomitants, a perpetual flow of tears from the eyes, or of mucus from the nostrils. And hence it is that dropsy of the head is so frequently a symptom or a sequel of inflammation of the brain, and particularly of parenchymatic inflammation.

Yet even here we have, sometimes, striking and most singular proofs, that the remedial power of nature is interfering either to obtain a cure, or to render the disease compatible with life, and with the general faculties of the sensorium. There is an interesting illustration of this remark in a case, related by Dr. Donald Monro, in the Medical Transactions. It is that of a child which at the age of a year and a half, was brought into St. George's Hospital with a head much enlarged from the disease before us. She was feverish and had a slight stupor.

GEN. I.  
SPEC. II.  
Hydrops  
capitis.  
Dropsy of  
the head.  
Water in  
the head.  
If the im-  
becility ex-  
tend to  
other parts,  
or be com-  
bined with  
defect of  
structure or  
substance,  
the mental  
powers may  
suffer; or if  
the fluid  
collect  
rapidly,  
symptoms  
of compres-  
sion may  
follow: and,  
conse-  
quently,  
inflamma-  
tion.

Singular  
efforts  
sometimes  
made by  
nature to  
obtain a  
cure, or  
render the  
disease  
compatible  
with life.  
Exempli-  
fied.

\* Conrad, Diss. de Hydrocephalo. Argent. 1778.

† Bonet, Sepulchr. Lib. 1. Sect. xvi. Obs. 9.

‡ Büttner Beschreibung des innern Wasserkopfs, &c. Königs. 1773.

GEN. I.  
SPEC. II.  
Hydrops  
capitis.  
Dropsy of  
the head.  
Water in  
the head.

The complaint was peculiarly obstinate, and resisted the use of purges, blisters, issues, bandages, and other remedies. The enlargement proceeded and became chronic, though the fever and stupor gradually diminished and at length ceased; yet the head continued to enlarge and kept an equal proportion with the child's growth: so that when in her eighth year, it measured two feet four inches round, which is nearly a foot more than it ought to have done, and the forehead alone was half the entire length of the face, or four inches out of eight, which is double the proportion it ought to have held,—yet the child was at this time as lively and sensible as most children of her age, and had a strong and peculiarly retentive memory. It was long before she could walk, on account of the vast weight of head she had to carry, and the difficulty of preserving a balance; but at length she learned to walk also with tolerable ease\*.

Additional  
illustration.

In the following case the efforts of the remedial power were less successful: but it is peculiarly worthy of notice, as much from the lateness of the age in which the disease commenced, and the sutures were separated, as from the natural struggle there seems to have been to obtain a triumph over it. It is related by Dr. Baillie, in another volume of the same valuable work. The patient was a boy, not less than seven years of age when he first became affected. The pupils, from an early stage, were considerably dilated and the pulse was somewhat irregular; he complained of pain towards the back of his head, and was often in a state of stupor. His understanding, however, was clear, and his sight very little impaired almost to the last. He had twice intervals of great promise, for a few weeks, with considerable abatement of all the symptoms, and an appearance of doing well. But in both instances he relapsed, and at the distance of ten months from the commencement, fell under daily attacks of convulsion fits. It is remarkable that,

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\* Medical Transactions, Vol. II. p. 359.

though his intellect continued unimpaired, the frontal and parietal bones, from the force of the accumulated fluid in every direction, were separated from each other, to a distance of from half to three quarters of an inch, notwithstanding that they had been firmly united at their respective sutures before the commencement of the disease. Nearly a pint of water was found in the ventricles upon examination.

GEN. I.  
SPEC. II.  
Hydrops  
capitis.  
Dropsy of  
the head.  
Water in  
the head.

We have observed, that in many cases the bones of the skull become peculiarly thin and pellucid, or are altogether deprived of their calcareous earth, and reduced to cartilages. But where the instinctive or remedial power of nature, which is always labouring to restore morbid parts to a state of health, or to enable them in their altered condition to fulfil their proper functions, has succeeded in rendering the diseased brain still capable of exercising some of its faculties, a supply of phosphate of lime, is, in various instances, also provided for the bony membrane; which not only re-assumes its ordinary firmness, but has sometimes exhibited a density far beyond the usual proportion and commensurate with the magnitude of the skull; while the cervical vertebræ have been equally strengthened for the purpose of bearing so enormous a load. Hildanus gives a case of this kind in a youth eighteen years old, who had laboured under a dropsy of the head from his third year. The skull was of an immense magnitude (*immensæ magnitudinis*) as well as peculiarly hard and solid. The patient spoke distinctly, but his mind was not equal to his articulation, and he suffered greatly from violent epileptic attacks\*. “If skulls of this kind,” says the Baron Van Swieten, “should be disinterred in their burial-ground by posterity, there would certainly not be wanting persons who would ascribe them to some gigantic family. If, indeed, the calvaria should be dug up entire the error may be corrected, by observing the size of the upper jaw-bones, which would be

Bones  
sometimes  
thickened  
instead of  
being rendered  
thinner:  
accounted  
for, and the  
advantage  
of this  
process.

Cervical  
vertebræ  
invigorated  
also in proportion.  
Illustrated.

Remark  
of Van  
Swieten  
upon this  
fact.

\* Observ. Chirurg. Cent. III. Obs. xix, p. 193.



GEN. I.  
SPEC. II.  
Hydrops  
capitis.  
Dropsy of  
the head.  
Water in  
the head.  
Prognos-  
tics.

found of the ordinary proportion: but if the bones should be separated and single, there could be no appeal to this distinctive mark\*.

The disease is always dangerous from the difficulty of determining its extent and what degree of cerebral disorganization may accompany it. Where, however, it is limited to a weak condition of the excrements of the brain it is often remediable and admits of a radical cure. But where on the contrary, no favourable impression can be made upon it, the general frame partakes by degrees of the debility, the vital powers flag, the limbs become emaciated, and death ensues at an uncertain period: or the patient survives, a miserable spectacle to the world and burden to himself; rarely reaching old age, but sometimes enduring life for twenty or even thirty years† before he is released from his sufferings. On opening the head twelve or fifteen pints of fluid have often been evacuated; and occasionally not less than twenty four or twenty-five pints‡, which have the singular property of not jellying even on exposure to heat§.

Prodigious  
quantity of  
fluid some-  
times found  
in the head.

Whether  
most com-  
mon to boys  
or girls.

The water has sometimes been found lodged in a cyst, and in a few instances the cerebrum itself has formed a sack for containing it. Morgagni asserts that the disease is more common to girls than to boys||. I do not know that the remark has been confirmed by any collateral authority.

Remedial  
process.

The cure, as in the preceding species, must be attempted by evacuating the water by internal or external means, and by giving tone to the debilitated organs.

Drastic  
purges little  
to be de-  
pended up-  
on in this  
species.

Drastic purges can rarely, in this form of the disease, be carried to such an extent as to be of essential service, on account of the early period of life in which it commonly

\* Comment. Tom. iv. Sect. 1217. p. 123.

† Van Swieten, Comment. loc. citat.

‡ Bonet, Sepulchr. Lib. i. Sect. xvi. Obs. 1.

Eph. Nat. Cur. Dec. iii. Ann. i. Obs. 10.

§ Hewson, on the Lymph. Syst. Part II. p. 193.

|| De Sed. et Caus. Mor. Ep. xii. Art. 6.

shows itself. For the same reason diaphoretics have not been generally recommended, or often found serviceable when ventured upon. Diuretics have been more frequently had recourse to; and particularly the digitalis. Dr. Withering was favourable to its use, but it has commonly, as in other forms of dropsy, proved more injurious than beneficial.

The best internal medicine is calomel, in small doses, in union with some carminative for the purpose of keeping up the action of the stomach, a healthy state of which is of great importance. The calomel, however, should be employed rather as a stimulant or tonic, so as to excite the mouths of the torpid vessels to a return of healthy action, than as a purgative or with a view of producing salivation; except indeed, where symptoms of inflammation are present, in which case it cannot be given too freely, as already observed under parenchymatic cephalitis\*. Where the disease has been unaccompanied with inflammatory symptoms, but nevertheless has been attended with a feverish irritation, and great heaviness, as well as considerable enlargement of the head, the author has found half a grain of calomel, given three times a-day, in the manner above proposed, and continued three times a day for a month, of essential service: and particularly in a case that occurred to him, many years ago, of a little boy who was four years old when the disease first appeared; which, however, had made its attack so insidiously as to escape the observation of the parents till the increased bulk of the head attracted their notice, which was soon afterwards succeeded by the symptoms just adverted to. The complaint had increased, the symptoms were more aggravated, and the skull, within six months, had become as large as that of an adult, when the mercurial process was commenced, accompanied with a free fomentation of the head with the solution of the acetate of ammonia, and an occasional use of purgatives. In ten

GEN. I.  
SPEC. II.  
Hydrops  
capitis.  
Dropsy of  
the head.  
Water in  
the head.  
Treatment.  
Diapho-  
retics rarely  
of use.  
Diuretics  
have been  
more gene-  
rally em-  
ployed.  
Best inter-  
nal medi-  
cine, calo-  
mel in  
small doses.

Exempli-  
fied.

GEN. I.  
SPEC. II.  
Hydrops  
capitis.  
Dropsy of  
the head.  
Water in  
the head.  
Treatment.  
Successful  
termina-  
tion.

Head but a  
little larger  
at twenty  
years old  
than at six.

External  
means for  
diminishing  
the contain-  
ed fluid.

Local sti-  
mulants  
when ser-  
viceable.

Evacuation  
of the water  
by the  
lancet :  
when to be  
tried :  
water to be  
evacuated  
gradually,  
and why.

days there was an evident improvement: the child was less languid, and feverish, and showed less desire to rest his head perpetually on a chair. The scull no longer augmented; the mental faculties which began to discover hebetude regained vigour, and the patient, now in his twentieth year, is an under-graduate in one of our universities, exhibiting a developement of talents that has already obtained for him various prizes, and gives a promise of considerable success hereafter. The bulk of his head is at this moment very little larger than it was at six years of age: a curious fact in pathology, though by no means uncommon: since where the disease forms space enough for a perfect growth of the brain, the calvaria ceases to expand, and the head becomes once more proportioned to the rest of the body.

The external means employed for diminishing the contained fluid have consisted in local stimulants, as different preparations of ammonia, blisters, and cauteries, and puncturing the integuments.

All local stimulants have a chance of being useful where the disease is seated near the surface, or between the membranes and the cranium, for they tend to excite the absorbents to an increased degree of tone and action, and consequently to a diminution of the general mass. But they do not seem to have much effect when the fluid issues from the convolutions or ventricles of the brain. Blistering the whole of the sinciput has unquestionably been found serviceable, and is perhaps the most effectual external stimulant we can employ.

The water has also been evacuated in many instances, with full success by a lancet: and, where the sutures gape very wide, and the integuments are considerably distended, this remedy ought always to be tried. The brain, however, like every other organ, when it has been long accustomed to the stimulus of pressure, cannot suddenly lose such a stimulus without a total loss of energy; and hence, as it is necessary in many cases of dropsy of the belly, to stop as soon as we have drawn off a certain portion of water, in order to avoid faintness, it is found

equally necessary to evacuate the water from the brain with caution and by separate stages; for where the whole has been discharged at once, the sensorial exhaustion has been so complete as to produce delirium and sudden death. Hence six or eight ounces are as much as it may be prudent to let loose at a time in an infant of three or four years of age; when the orifice should be covered with a piece of adhesive plaster, and an interval of a day or two be allowed. The operation, indeed, is very far from succeeding in every instance: for in some cases there is so much internal disease or even disorganization, that success is not to be obtained by any means. And next, a fresh tide of water will not unfrequently accumulate, and the head become as much distended as before. Still however, the attempt should be made, and even repeated and repeated again if a fresh flow of fluid should demand it: for the disease has occasionally been found to yield to a second or third evacuation, where it has triumphed over the first.

Dr. Vose of Liverpool, has published an instructive case of this kind in the ninth volume of the *Medico-Chirurgical Transactions*. The patient was seven months old, and the head between two and three times its natural size when the operation was first performed. On this occasion a couching needle was made use of, and the orifice was closed when three ounces and five drachms of fluid were evacuated: about an equal quantity was conjectured to dribble from the orifice after the operation, at which time the infant became extremely faint, and the integuments of the head had shrivelled into the shape of a pendulous bag. He revived, however, with the aid of a little cordial medicine; and, the water accumulating afresh, a second operation was performed by a bistory about six weeks after, when eight ounces of fluid were drawn off with little constitutional disturbance; which was succeeded only nine days later by a third operation, that yielded, by the introduction of a grooved director, twelve ounces, without any interference with the general health whatever. A copious and vicarious discharge of

GEN. I.  
SPEC. II.  
Hydrops  
capitis.  
Dropsy of  
the head.  
Water in  
the head.  
Treatment.

Operation  
does not  
always suc-  
ceed: and  
why.

Perforation  
should be  
repeated if  
necessary  
several  
times in  
succession.

Advantages  
of this plan  
exemplified  
from Vose.



GEN. I.  
SPEC. II.  
Hydrops  
capitis.  
Dropsy of  
the head.  
Water in  
the head.  
Treatment.  
Compres-  
sion recom-  
mended  
through the  
whole  
course of  
the disease,  
but gene-  
rally mis-  
chievous.

Yet may  
be of great  
use after  
evacuating  
the water.

serum from the rectum took place shortly after this third puncture of the integuments, which was succeeded by some degree of deliquium; but from this also, the patient soon recovered; the head gradually diminished in size, and a complete cure was at length effected.

Formey \*, Pitschel †, and several other writers, have recommended compression, with a view of stimulating the torpid mouths of the absorbents to a resumption of their proper action. But no compression can be made on these, whatever they may consist in (for absorbents have not hitherto been detected in the brain), without compressing at the same time, parts that are injured by pressure already. Advantage, however, may be taken of the recommendation after the brain has been evacuated; and a proper compress about the shrivelled head, may be of as much use in preventing deliquium, and perhaps, by its excitement, in stimulating the torpid vessels to a return of their proper function, as it is well known to be of when applied around the abdomen after the use of the trocar.

### SPECIES III.

## HYDROPS SPINÆ.

### Dropsy of the Spine.

SOFT FLUCTUATING EXTUBERANCE ON THE SPINE;  
GAPING VERTEBRÆ.

GEN. I.  
SPEC. III.  
Spinabifida  
of authors,  
why so  
called.

THIS is the spina *bifida* of authors, so called from the double channel which is often produced by it through a considerable length of the vertebral column: a natural channel for the spinal marrow, and a morbid channel running in a parallel line, and equally descending from

\* Ad Riverii, Observ. Medic. Cent. v.

† Anat. and Chir. Anmerk. Dresd. 1784.

the brain, and filled with the fluid which constitutes the disease.

It is sometimes local, but in most instances is connected with a morbid state of the brain, and directly communicates with it. In this last form it may be regarded as a compound dropsy of this organ, the accumulating water working its way down towards the foramen ovale in consequence of its dependent position, or a deficiency in the substance of the brain in this quarter, instead of up towards the fontanel. In both cases the surrounding dura mater gives way, and, in the last, forms a sinus, which, as it descends, winds itself through any accidental opening that may exist in or between the bones of the vertebræ, and distends the superincumbent integuments into the same kind of tumour that we have already noticed as sometimes existing on the crown of the head, when the fluid is pressed in an upper direction.

Dropsy of the spine is mostly congenital, and consequently a disease of fetal life; in many instances, however, the tumour does not show itself till some weeks, or even months after the birth of the child. The degree of danger must depend upon the structural defect, or other mischief that exists in the brain or the substance of the spinal marrow. It has sometimes appeared as a local affection in adult age, and has admitted of a cure; but, from its usually occurring in the earliest and feeblest stage of life, and often before the sensorium is fully developed, so as, indeed to prevent its developement in a perfect form, it is rarely remediable. We observed in the last species that the bones of the cranium are often found imperfect; and it is hence not to be wondered at that the bones of the vertebræ should exhibit a like imperfection in the present, and allow a protrusion externally. Fieliz gives a case in which the whole of the spinous processes were deficient, and the dropsy extended through the entire length of the spine\*.

GEN. I.  
SPEC. III.  
Hydrops  
spinæ.  
Dropsy of  
the spine.  
Nature of  
the disease  
explained.

Mostly  
congenital:  
but the tumour often  
does not  
show itself  
till several  
months  
after birth.  
Sometimes  
a local af-  
fection and  
admits of  
cure:  
but gene-  
rally con-  
nected with  
some seri-  
ous mis-  
chief in the  
brain, and  
hence rare-  
ly remedi-  
able.  
The whole  
of the  
spinous  
processes  
have been  
found defi-  
cient.

\* In Richter, Chir. Bibl. Band. ix. p. 185.

GEN. I.  
SPEC. III.  
Hydrops  
spinæ.  
Dropsy of  
the spine.  
Ordinary  
termination  
when the  
disease is  
left to it-  
self.  
Effects of  
medical  
treatment.

How far  
compression may be  
useful.

Has some-  
times ter-  
minated fa-  
vourably  
under dif-  
ferent me-  
thods.

Life has  
been pro-  
tracted  
during the  
disease to  
adole-  
scence.

The integuments are here thinner and more disposed to burst than in the head, and hence, if the tumour be left to its natural course, it commonly continues to enlarge till it bursts; while, if it be opened, the child, in most cases, dies from exhaustion and deliquium, as in dropsy of the head, provided the water be evacuated entirely; and if it be discharged gradually, an inflammation of the spinal marrow is apt to ensue, which proves as fatal. Hence there is much reason in the advice of Mr. Warner merely to support the tumour, but not to touch it otherwise, and, in the mean while, to see how far we can give the remedial power of nature an opportunity of exerting itself by invigorating the frame generally. Something, however, beyond support may be safely ventured upon, for a gentle compression may be tried with propriety, and if found to do no mischief, it should be gradually increased. If the disease extend to the ventricles it will probably be of little use, but if it be local, it may ultimately prove successful.

This form of dropsy is mostly fatal; but there are a few cases on record of a successful termination upon the employment of different methods. Thus, Heister, who in his day also recommended compression, gives an example of its having radically yielded to this plan, in union with spirituous liniments\*; and Fantoni†, and Heilmann‡, describe, each of them, an instance of a perfect cure upon opening and evacuating the cavity. In all which instances, however, it seems probable that there was no such communication with the brain, or that the brain, or spinal marrow, was less affected than they ordinarily appear to be.

A few singular cases have occurred of young persons protracting a miserable existence under this disease to the age of adolescence. Martini mentions a youth who

\* Wahrnehmung. B. II.

† In Pacchioni Animadvers. cit.,  
Morgagni De Sed. et Caus.

‡ Prodróm. Act. Havn. p. 136.

lived till eleven years old; and Acrel notices others who survived till seventeen \*, but with paralytic sphincters of the anus and bladder.

GEN. I.  
SPEC. III.  
Hydrops  
spinæ.  
Dropsy of  
the spine.

## SPECIES IV.

### HYDROPS THORACIS.

#### Dropsy of the Chest.

SENSE OF OPPRESSION IN THE CHEST; DYSPNŒA ON EXERCISE, OR DECUMBITURE; LIVID COUNTENANCE; URINE RED AND SPARE; PULSE IRREGULAR; EDEMATOUS EXTREMITIES; PALPITATION, AND STARTINGS DURING SLEEP.

THIS is the hydrothorax of authors; and the secreted fluid, in direct opposition to that of hydrocephalus, commonly, perhaps always, jellies upon exposure to heat.

Sauvages, who has made this disease a genus, gives a considerable number of species under it, derived from the particular part or cavity of the thorax which is occupied, or the peculiar nature of the effusion; as hydrops mediastini, pleuræ, pericardii, hydatidosus; to which he might have added pulmonalis, as the water is, perhaps, sometimes effused into the cellular texture of the lungs. But as these can never, with any degree of certainty, be distinguished from each other till after death, and as such distinction could make no essential difference in the mode of treatment, it is unnecessary to notice them, and is scarcely consistent with an arrangement founded upon symptoms alone. Those who are desirous of examining

Hydrothorax of authors.

Subdivisions of Sauvages.

Hydrops mediastini,  
H. pleuræ,  
H. pericardii,  
H. pulmonalis.

No critical signs to discriminate them from each other.

\* Schwed. Abhandl. B. x. p. 291. seq.



GEN. I.  
SPEC. IV.  
Hydrops  
thoracis.  
Dropsey of  
the chest.  
Supposed  
distinctive  
symptoms  
well no-  
ticed by  
Maclean.

into the curious, and often contradictory signs by which these several forms of pectoral dropsy have been attempted to be discriminated by various writers, may turn with advantage to Sir L. Maclean's work upon the subject, where he will find them selected with much patient study, and accompanied with many judicious remarks\*. In the present place it may be sufficient to observe that the disease is, in fact, sometimes limited to any one of those parts, and sometimes extends to several of them: and that when it occurs as a consequence of cellular dropsy, it is in a greater or less degree common to the whole.

Commence-  
ment of the  
disease.

The complaint originates with little or no observation and continues its course imperceptibly; there is at length found to be some difficulty of breathing, particularly on exertion or motion of any kind, or when the body is in a recumbent position, usually accompanied with a dry and troublesome cough, and an edema of the ancles towards the evening. Then follow, in quick succession, the symptoms enumerated in the definition, several of which I have drawn directly from my friend Sir L. Maclean's very accurate arrangement of them. The difficulty of breathing becomes, at length, peculiarly distressing, and the patient can obtain no rest but in an erect posture; while even in this condition he often starts suddenly in his sleep, calls vehemently for the windows to be opened, and feels in danger of suffocation. His eyes stare about in great anxiety, the livid hue of his cheeks is intermixed with a deadly paleness, his pulse is weak and irregular, and as soon as the constrictive spasm of the chest is over, he relapses into a state of drowsiness and insensibility. By applying the hand to the sides and using a slight degree of percussion, we shall sometimes be able to trace a slight degree of fluctuation.

Progress.

Termina-  
tion.

The disease, contrary to the preceding species is

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\* Inquiry into the Nature, Causes, and Cure of Hydrothorax. p. 52, 70. 8vo. 1810.

mostly to be found in advanced life, and its duration chiefly depends upon the strength and habit of the patient at the time of its incursion. It is hence, in some cases, of long continuance, while in others the patient is suddenly cut off, during one of the violent spasms, which at length attack him as well awake as in the midst of sleep.

GEN. I.  
SPEC. IV.  
Hydrops  
thoracis.  
Dropsy of  
the chest.

The causes are those of dropsy in general, upon which we have already enlarged, acting more immediately upon the organs of the chest, and inducing some organic affection of the heart, lungs, or the larger arteries. We also frequently find, upon dissection, that the disease has been produced, or considerably augmented by a number of hydatids (*tænia hydatidis*, Linn.) some of which appear to be floating loosely in the effused fluid, and others to adhere to particular parts of the internal surface of the pleura, constituting the hydrothorax hydatidosus of Sauvages. They consist of spherical vesicles containing a watery fluid, whose circular membrane is possessed of a living power and a peculiar organization that enables them to attach themselves to the internal surface of a cavity, and to suck up the more attenuate and limpid humours from the neighbouring parts.

Causes general and particular.

Hydrops  
hydatidosus of  
Sauvages.

The only decisive symptom in this disease is the fluctuation of water in the chest, whenever it can be ascertained; for several of the other signs are often wanting, or, in a separate state, are to be found in other complaints of the chest as well as in dropsy, more particularly in asthma and empyema. And hence, in determining the presence of this disorder we are to look for them conjointly, and not to depend upon any one when alone. Even when associated, we are sometimes in obscurity: and the difficulty of indicating the disease by any set of symptoms has been sufficiently pointed out by De Haen\*; while Lentin†, Stoerck‡ and Rufus§ have given in-

The only  
decisive  
sign, a fluctuation of  
water.

\* Rat. Med. P. v. p. 97.

† In Blumenbach Biblioth. III.

‡ Ann. Med. II. p. 266.

§ Ad River. Observ. Med.

GEN. I.  
SPEC. IV.  
Hydrops  
thoracis.  
Dropsy of  
the chest.

stances of its existence without any symptoms whatever: and Morgagni with few or none\*. Bonet observes that dyspnœa † is not an indication common to to all cases ‡, and Morgagni, that startings during sleep or on waking, do not always accompany the disease, and may certainly exist without it. Hoffmann and Baglivi have given, as an additional symptom, intumescence and torpitude of the left hand and arm; but even this affection, or the more ordinary one of laborious respiration, has existed without water in the chest. De Rueff relates a singular case in a man who was attacked with most of the symptoms jointly, at the age of about sixty; and was supposed to be in the last stage of this disease. He recovered by an ordinary course of medicine, and died at the age of eighty with his chest perfectly sound to the last §.

Medical  
treatment.  
General  
principles  
already  
laid down.

Squill pe-  
culiarly va-  
luable.

Foxglove of  
doubtful  
efficacy.

The general principles to be attended to in the mode of treatment, are the same as have already been laid down under *HYDROPS cellularis*: for, as already observed, the causes are similar, and only varied by an accidental deposition of the morbid fluid in the chest, in consequence of a peculiar debility in the thoracic viscera, or of some organic misaffection. The squill is here a more valuable medicine than in most other species; as, independently of its diuretic virtue, it affords great relief to the dry and teasing cough, and in some degree, perhaps, to the pressure of the fluid itself, by exciting the excretories of the lungs to an increased discharge of mucus. Digitalis, as in other species of the same genus, is a doubtful remedy; its diuretic effects are considerable, but, however cautiously administered, it too often sinks the pulse, and diminishes the vital energy generally; and is particularly distressing from its producing nausea, and endangering deliquium; results which ought

\* De Sed. et Caus. Morb. Ep. xvi. Art. 2. 4. 6. 8. 11.

† Ep. cit. Art. 28. 30.

‡ Sepulchr. Lib. II. Sect. 1. Obs. 72. 84.

§ Nov. Act. Acad. Nat. Cur. Tom. IV. 4to. Norimb.

more especially to be guarded against in dropsy of the chest, as it is, in most cases, not merely a disease of debility but of enfeebled age. Sir L. Maclean is a firm friend to its use in almost every case: but even he is obliged to admit that the state of the pulse, the stomach, the bowels, and the sensorial function, should be attentively observed by every one who prescribes it. And under the following provision, which he immediately lays down, there can be no difficulty in consenting to employ it. "If these be carefully watched, and *the medicine withdrawn as soon as any of them are materially affected*, I hesitate not to affirm that no serious inconvenience will ever ensue from it, and that it may be administered with as much safety as any of the more active medicines in daily use \*."

GEN. I.  
SPEC. IV.  
Hydrops  
thoracis.  
Dropsy of  
the chest.

Caution-  
ary advice  
of Maclean  
during its  
use.

Blisters are, in many cases, of considerable avail; they act more directly, and therefore more rapidly and effectually than in most other modes of dropsy, and should be among the first remedies we have recourse to.

The strong symptoms of congestion under which the heart seems, in some instances, to labour, has, occasionally induced practitioners to try the effect of venesection: and there are cases in which it has unquestionably been found serviceable: as that more especially related by Dr. Home, in which he employed it seven times in the course of eighteen days, and hereby produced a cure †. I am induced to think, however, that in this instance the dropsy was an effect of the obstruction under which the heart laboured, rather than that the obstruction was an effect of the dropsy. And in all instances of this kind no practice can be more prudent. But where the dropsy is primary and idiopathic, all such obstructions will be more safely and even more effectually relieved by a quick and drastic purge than by venesection.

Venesection,  
in what  
cases serviceable.

Rarely to  
be employed  
in idiopathic  
affections.

Opium is a medicine that seems peculiarly adapted to

Opium.

\* Inquiry into the Nature, &c. of Hydrothorax, p. 171.

† Clinical Experiments, p. 346.



GEN. I.  
SPEC. IV.  
Hydrops  
thoracis.  
Dropsy of  
the chest.  
mostly in-  
jurious  
alone:  
but bene-  
ficial with  
squills or  
ipecacuan.  
External  
revellents.

many of the symptoms: but by itself it succeeds very rarely, heating the skin and exciting stupor rather than refreshing sleep. When mixed, however, with the squill pill, or with small doses of ipecacuan, and, if the bowels be confined, with two or three grains of calomel, it often succeeds in charming the spasmodic struggle of the night and obtaining for the patient a few hours of pleasant oblivion.

Besides blisters as external revellents, setons and caustics have sometimes been made use of, and especially in the arms or legs. Baglivi preferred the cautery and applied it to the latter\*; Zacutus Lusitanus to both, and employed it in connexion with diuretics and tonics†.

Paracente-  
sis:  
of early  
origin.

Tapping is another external mean of evacuating the water. The practice is of ancient date, and is described by most of the Greek writers. To avoid the effect of a dangerous deliquium from a sudden removal of the pressure, Hippocrates allowed, in many instances, thirteen days before the fluid was entirely drawn off. And to prevent the inconvenience resulting from a collapse of the integuments, and the necessity of a fresh opening or the retention of a canula in the orifice through the whole of this period, he advised that a small perforation should be made in one of the ribs, and that the trocar should enter through this foramen‡.

Objections  
to its use:

There are two very powerful objections, however, to the use of the trocar. The first is common to most dropsies, and consists in its offering, in most instances, nothing more than a palliative. The second is peculiar to the present species, and consists in the uncertainty of drawing off any water whatever, from the obscurity or complicated nature of the complaint, upon which we have touched already. If the fluid be lodged in the pericardium, the duplicature of the mediastinum, or the cellular texture of the lungs, it is obvious that the operation

mostly a  
mere pallia-  
tive:

uncertain  
of obtaining  
evacuation  
from vari-  
ous causes.

\* Opp. p. 103.

† Prax. Admir. Lib. I. Obs. 112.

‡ Περὶ τῆς πνεύματος, Lib. LIII. p. 544.

must be to no purpose. And yet, with the rare exception of a palpable fluctuation in the chest, we have no set of symptoms that will certainly discriminate these different forms of the disease. It must be also equally in vain if the fluid be confined in a cyst, as has occasionally proved a fact, unless the operator should have the good fortune to pierce the cyst by accident. And, in a few instances, again, the fluid, which has at all times a striking tendency to become inspissated, has been found so viscid as not to flow: of which Saviard has given us a striking example\*.

A considerable pause is necessary, therefore, before tapping is decided upon: nor ought it ever to be employed till the ordinary internal means have been tried to no purpose. But where these have been tried and without avail; and more especially where we have reason to ascribe the disease to local debility or some local obstruction rather than to a general decline of the constitution; and more especially still, where we have the satisfaction of ascertaining a fluctuation, or of noticing, as has sometimes occurred, that the ribs bulge out on the affected side, the operation may be ventured upon, and will often be found serviceable. The ordinary place for introducing the instrument is between the fourth and fifth of the false ribs, about four fingers' breadth from the spine. Du Verney, however, recommends between the second and third of the false ribs: and, in different cases, there may be reason for even a greater latitude than this.

On the Continent the operation of tapping is far more frequently tried than in our own country: and the German Miscellanies are full of cases of a successful event. In the volume of Nosology I have given an account of many of these; in several of which the quantity of water evacuated appears to have been very considerable. Thus in one instance, a hundred and fifty pounds were discharged at a single time: in others between four and

GEN. I.  
SPEC. IV.  
Hydrops  
thoracis.  
Dropsy of  
the chest.

Hence to  
be employ-  
ed with  
caution.

And only  
after inter-  
nal reme-  
dies have  
failed.

Trochar  
where to be  
applied.

More fre-  
quently  
used on the  
Continent:  
and hence  
more nume-  
rous cases  
of a suc-  
cessful  
issue.

Quantity  
of fluid eva-  
cuated  
often very  
enormous.

\* Recueil d'Observations Chirurgiques, &c. Paris, 1784.

GEN. I.  
SPEC. IV.  
Hydrops  
thoracis.  
Dropsy of  
the chest.  
Cure effected  
by an  
accident.

five hundred pounds by different tappings within the year: and in a single example nearly seven thousand pints, in eighty operations, during a period of twenty five years through which the patient laboured under this complaint; having hereby prolonged a miserable existence, which doubtless would have terminated without it much earlier, but which, perhaps, was hardly worth prolonging at such an expense. In the Berlin Medical Transaction there is a case of a cure effected by an accidental wound made into the thorax by which the whole of the water escaped at once\*.

Disease has  
sometimes  
ceased  
spontaneously.

In a few rare instances we have reason to believe that the disease has ceased spontaneously, judging from the trifling remedies that were employed at the time: as, for example, the specific of eighteen ounces of dandelion-juice taken daily, which, according to Hautesierk, succeeded radically in one patient, or the use of small doses of squills alone, which, in the hands of Tissot, was equally fortunate in another.

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## SPECIES V.

### HYDROPS ABDOMINIS.

#### Dropsy of the Belly.

TENSE, HEAVY, AND EQUABLE INTUMESCENCE OF THE WHOLE BELLY; DISTINCTLY FLUCTUATING TO THE HAND UPON A SLIGHT STROKE BEING GIVEN TO THE OPPOSITE SIDE.

GEN. I.  
SPEC. V.  
Ascites of  
authors.

THIS is the ascites of nosologists. It is sometimes a result of general debility operating chiefly on the exha-

lants that open on the internal surface of the sac of the peritonæum and the abdominal muscles: sometimes occasioned by local debility or some other disease of one or more of the abdominal organs considerably infarcted and enlarged, and sometimes a metastasis or secondary disease produced by repelled gout, exanthems or other cutaneous eruptions: examples of all which are to be found in Morgagni \*, and offer the three following varieties, which may not unfrequently be applied to the preceding species:

GEN. I.  
SPEC. V.  
Hydrops  
abdominis.  
Dropsy of  
the belly.  
Causes and  
variable  
seat of the  
disease.

- |                                 |  |
|---------------------------------|--|
| α Atonica.                      | Preceded by general debility of the constitution.  |
| Atonic dropsy of the belly.     |  |
| ε Parabysmica.                  | Preceded by or accompanied with oppilation or indurated enlargement of one or more of the abdominal viscera. |
| Parabysmic dropsy of the belly. |  |
| γ Metastatica.                  | From repelled gout, exanthems or other cutaneous eruptions.  |
| Metastatic dropsy of the belly. |  |

In the FIRST VARIETY, the fluid is found in the cavity of the abdomen, or between the peritonæum and the abdominal muscles. It is produced by any of the causes of general debility, operating on an hydropic diathesis; and is frequently a result of scurvy, or various fevers.

α H. abdominalis atonica.  
Atonic dropsy of the belly.

In the SECOND VARIETY, the organ most commonly affected is the liver, which is occasionally loaded with hydatids, and has sometimes weighed twelve pounds. The gall-bladder is often proportionally enlarged and turgid, and has occasionally been found with an obliterated meatus, full of a coffee-like fluid, and together with its contents has weighed upwards of ten pounds. The accumulation has also sometimes been discovered in the

ε H. abdominalis parabysmica.  
Parabysmic dropsy of the belly.

\* De Sed. et Caus. Morb. Ep. xxxviii. Art. 49.



GEN. I.  
SPEC. V.  
6 H. abdo-  
minalis  
parabys-  
mica.  
Parabys-  
micdropsy  
of the belly.  
7 H. abdo-  
minalis me-  
tastatica.  
Metastatic  
dropsy of  
the belly.

Pregnancy  
concealed  
under  
dropsy, or  
mistaken  
for it.  
Both have  
co-existed :

not always  
easy to dis-  
tinguish  
between the  
two.  
Exempli-  
fied.

omentum \*, or sides of the intestines †. In this second variety the disease is often denominated an encysted dropsy; a term, however, which will quite as well apply to dropsies of the ovaria, the Fallopian tube, and even the uterus and scrotum, as to that of the liver.

In the THIRD VARIETY the fluid is commonly deposited in the cavity of the abdomen; and is far more easily removed than in either of the others; often yielding, indeed, to a few drastic purges alone: except where, as sometimes happens in metastatic dropsy from repelled gout, the constitution has been broken down by a long succession of previous paroxysms.

Under the veil of dropsy, pregnancy has often been purposely disguised; and, sometimes, on the contrary, where pregnancy has been ardently wished for and has actually taken place, it has been mistaken for a case of ascites: while, in a few instances, both have co-existed: Mauriceau, indeed, mentions a case of pregnancy recurring a second time along with dropsy ‡: and in an hydropic diathesis there is a general tendency to the latter whenever the former makes its appearance; for the exhalants of the abdomen are easily thrown into a morbid condition, and the pressure of the uterus, as it enlarges, weakens and torpifies their action. If dropsy occur at a period of life when the catamenia are on the point of naturally taking their leave, and where the patient has been married for many years without ever having been impregnated, it is not always easy, from the collateral signs, to distinguish between the two. A lady under these circumstances was a few years ago attended for several months by three or four of the most celebrated physicians of this metropolis, one of whom was a practitioner in midwifery, and concurred with the rest in affirming that her disease was an encysted dropsy of the abdomen. She

\* De Haen. Rat. Med. P. iv. p. 95.

Senberlich, Pr. de Hydrope omenti saccato. Fr. 1752.

† Frank, in Commentation. Goetting, vii. 74.

‡ Traité des Maladies des Femmes grosses. ii. p. 59. 204.

was in consequence put under a very active series of different evacuants; a fresh plan being had recourse to as soon as a preceding had failed; and was successively purged, blistered, salivated, treated with powerful diuretics, and the warm-bath, but equally to no purpose: for the swelling still increased and became firmer; the face and general form were emaciated, the breathing was laborious, the discharge of urine small, and the appetite intractable; till at length these threatening symptoms were followed by a succession of sudden and excruciating pains, that by the domestics, who were not prepared for their appearance, were supposed to be the forerunners of a speedy dissolution, but which fortunately terminated before the arrival of a single medical attendant, in giving birth to an infant that, like its mother, had wonderfully withstood the whole of the preceding medical warfare without injury.

In all common cases, the best means we can take to guard against deception, are to inquire into the state of the menses, of the mammæ, and of the swelling itself. If the menses continue regular, if the mammæ appear flat or shrivelled with a contracted and light-coloured areola; and if the intumescence fluctuate to a tap of the fingers, there can be no doubt of its being a case of dropsy: but if, on the contrary, the mammæ appear plump and globular with a broad and deep-coloured areola; if we can learn, which, in cases where pregnancy is wished to be concealed, we often cannot do, that the catamenia have for some time been obstructed; and if the swelling appear uniformly hard and solid, and more especially if it be seated chiefly just above the symphysis of the pubes, or, provided it be higher, if it be round, and circumscribed,—though we may occasionally err, there can be little or no doubt, in most instances, of the existence of pregnancy. The most difficult of all cases is that in which dropsy and pregnancy take place simultaneously. It is a most distressing combination for the patient; and can only be treated with palliatives till the time of childbirth.

GEN. I.  
SPEC. V.  
γ H. abdominalis metastatica.  
Metastatic dropsy of the belly.

Ordinary characters distinctive of dropsy.

Ordinary characters distinctive of pregnancy.

Case truly distressing when the two unite.

GEN. I.  
SPEC. V.  
y H. abdominalis metastatica.  
Metastatic dropsy of the belly.  
Ordinary causes of dropsy of the abdomen, those of cellular dropsy.  
Why the present species produced by these causes rather than cellular dropsy.  
Why more frequent.  
General symptoms.  
Peculiar symptoms.

The ordinary causes of dropsy of the abdomen are those of cellular dropsy, of which we have treated at considerable length already, and to which the reader may therefore refer himself: the only difference being, as in dropsy of the chest, that the excrements of these cavities, are, from particular circumstances, more open at the time to the influence of whatever may happen to be the cause than the excrements of the cellular membrane, or of any other part of the system. From the extent, however, of the abdominal region, and the connexion of its cavity with so many large and important viscera, and especially with the liver, we can be at no loss in accounting for a more frequent appearance of dropsy under this species than under any other.

The general symptoms, moreover, are those of cellular dropsy. The appetite flags, there is the same aversion to motion and sluggishness when engaged in it, the same intolerable thirst, dryness of the skin, and diminution of all the natural discharges. The peculiar symptoms, as distinct from cellular dropsy, are the gradual swelling of the belly, and, as a consequence of this, a dry, irritable cough and difficulty of respiration.

Signs of encysted dropsy,

It is often as difficult to determine whether the water be seated in the cavity of the abdomen or in the liver, omentum, or any other cyst, as in making a like distinction in dropsy of the chest. But, generally speaking, if we have previously had reason to suspect a diseased condition of any of these organs, if the abdominal swelling be local or unequal, and the constitution do not seem to enter readily into the morbid action, and the remaining functions retain a healthy vigour, we may suspect the dropsy to be of the encysted form. While, on the contrary, if the animal frame evince general weakness, if the limbs be edematous, the appetite fail, and the secretions be concurrently small and restricted, there is good reason for believing that the fluid is effused into the cavity of the peritonæum.

as distinguished from dropsy in the cavity of the abdomen.

Medical treatment.

The treatment of ascites, as to its general principles and plan, must be the same as that already laid down for



anasarca or cellular dropsy: but here, instead of evacuating the water by scarification, we can often very advantageously, and more easily than in any of the preceding species, draw it off at once by tapping. Where, indeed, the dropsy is of the encysted kind, our efforts will often prove in vain; for we may either miss the proper viscus, or the fluid lodged in the separate vesicles of a vast aggregation of hydatids, amounting sometimes to seven, eight, or nine thousand at a time \*, cannot be set free. But where it lies in the peritonæal sac alone, or on the outside of this sac alone, we can often afford very great relief by this simple process, and sometimes an effectual cure. It ought, therefore, by no means to be delayed as it often is till the debility from being local has become general, nor can the operation be too soon performed after a fluctuation is distinctly felt, and the swelling from its bulk has become troublesome to the breathing, and interferes with the night's rest. Nor should we be deterred if the first evacuation do not fully succeed. On the contrary, if the general strength seem to augment for some time after the operation, the appetite to improve, and the usual symptoms of the disease to diminish, we may take courage from our first success, and augur still more favourably from a second or even a third attempt if it should be necessary. Various cases have fallen to the lot of the author in which a radical cure has only been completed in this manner: nor are instances wanting in which the patient has only recovered after the twelfth time of operating. Hautesierk gives an instance of cure after sixty tappings within two years and a half, in conjunction with a steady use of aperients and tonics †: and Martin, in the Swedish Transactions, relates another instance of an infant of four years old restored after a second use of the trocar, in conjunction with a like course of medicines.

GEN. I.  
SPEC. V.  
Hydrops  
abdominis.  
Dropsy of  
the belly.  
Treatment.  
Tapping  
rather than  
scarifica-  
tion where  
the water is  
encysted  
the opera-  
tion often  
unsuccess-  
ful.  
But when in  
the perito-  
neal sac  
peculiarly  
useful: and  
to be per-  
formed  
early in the  
disease,  
after fluc-  
tuation is  
felt.  
Operation  
will often  
require to  
be repeated

and that  
many  
times.  
Sixty tap-  
pings with-  
in two  
years and a  
half.

\* *Commerc. Nor.* 1731, p. 271.

† *Recueil*, II.



GEN. I.

SPEC. V.

Hydrops  
abdominis.Dropsy of  
the belly.

Treatment.

Internal  
evacuants.The thirst  
may be  
quenched  
by an in-  
dulgence in  
subacid  
drinks.Alliacea for  
ordinary  
food, and  
asparagus.Tapping  
does not  
always ra-  
dically suc-  
ceed: and  
why?But still  
useful as a  
palliative.Quantity  
evacuated  
sometimes  
enormous.  
Exempli-  
fied.

Internal evacuants therefore, as far as the strength will allow, and tonic restoratives generally, should be called to our aid through the entire process of cure, as already recommended under *HYDROPS cellularis*. The thirst, which is often unconquerable, and the most distressing of all the symptoms, may be allayed, as we have already pointed out, by a free use of subacid drinks, the desire for which is by no means to be repressed, as the absorbents of the skin are always stimulated by the irritation of an ungratified desire to imbibe far more fluid from the atmosphere than any indulgence in drinking can amount to: as ordinary food, the alliaceous plants which give an agreeable excitement to the stomach, and at the same time quicken the action of the kidneys, will be found highly useful: and asparagus, which in an inferior degree answers the last of these purposes, may make a pleasant change in its season.

After all it must be confessed that tapping, is often employed without radical success, for the disease, under all its modifications, is too often incurable. Yet even in the worst of cases it has its advantage as a palliative; and it is no small consolation to be able to procure temporary ease and comfort in the long progress of a chronic but fatal disease.

The quantity evacuated by the operation of tapping has, in some instances, been enormous. It has often amounted to eight gallons at a time, and Dr. Stoerck gives an instance of twelve gallons and a half\*. Guattani relates a case in which thirty pints of an oily fluid were, in like manner, evacuated by a single paracentesis. This disease was produced by an aneurismal affection†, and it shows great irregularity of action in the absorbent system: for while the absorbents of the peritonæal sac were in the utmost degree dull and torpid, those of the surface were in a like degree irritable, and drunk up all the ani-

\* Ann. Med. i. p. 149.

† De Aneurismatibus.

mal oil from the cellular membrane, as well as all the moisture they came in contact with from the atmosphere. The operation has frequently been repeated forty or fifty times upon the same patient; and sometimes much oftener. In the Edinburgh Medical Communications is a case in which it occurred ninety-eight times within three years\*. And in a foreign Journal of repute is another case in which the operation was repeated a hundred and forty-three times, though the total quantity evacuated is not given†. Dr. Scott of Harwich performed the operation twenty-four times in only fifteen months, and drew off a hundred and sixteen gallons in the whole‡.

Occasionally, both abdominal and cellular dropsy have been carried off by a spontaneous flow of water from some organ or other. In the latter species most frequently by a natural fontanel in some one of the extremities, as the hand, foot, or scrotum§. In the former by a spontaneous rupture of the protuberant umbilicus, of which the instances in the medical records are very numerous ||: And hence many operators, taking a hint from this spontaneous mode of cure, have preferred making an incision into the umbilicus with a lancet to the use of the trocar. Paullini relates a singular mode of operation, and which, though it completely succeeded, is not likely to be had recourse to very often. The patient, not submitting to the use of the trocar, had the good fortune to be gored in the belly by a bull; the opening proved effectual and he recovered ¶.

There are also a few instances of a subsidence of the

GEN. I.  
SPEC. V.  
Hydrops  
abdominis.  
Dropsy of  
the belly.  
Treatment.  
Operation  
often re-  
peated on  
the same  
person.  
Exempli-  
fied.

Has been  
carried off  
spontane-  
ously.

Has been  
cured by an  
accident.

Sometimes  
carried off  
by a vica-  
rious dis-  
charge.

\* Vol. iv. p. 378.

† N. Samml. Med. Wahrnehmungen, B. III. p. 94.

‡ Edinb. Med. Comment. Vol. vi. p. 441.

§ Reidlin, Linn. Med. 1696. p. 258.

Schenck, Lib. III. Sect. II. Obs. 136. ex Hollerio. Obs. 140. 141.

|| Desportes, Hist. de Malad. de St. Dominiques II. 122.

Schenck, Lib. III. Sect. II. Obs. 147.

Forestus, Lib. XIX. Obs. 33.

¶ Cent. II. Obs. 10.

GEN. I.  
SPEC. V.

accumulation upon a spontaneous efflux of some other kind; especially of blood, and chiefly from the hemorrhoidal vessels\*.

## SPECIES VI.

### HYDROPS OVARII.

#### *Dropsy of the Ovary.*

HEAVY INTUMESCENCE OF THE ILIAC REGION ON ONE OR BOTH SIDES: GRADUALLY SPREADING OVER THE BELLY; WITH OBSCURE FLUCTUATION.

GEN. I.  
SPEC. VI.

May be mistaken for pregnancy: or a variety of abdominal dropsy. In the last case, the mistake of not much importance. Distinguishing signs of pregnancy.

Distinguishing signs of dropsy of the ovary.

THERE is the same difficulty in distinguishing this disease from pregnancy as in dropsy of the belly: and, consequently, the same mistakes have occasionally been made. There is also quite as much difficulty in distinguishing it from the parabysmic variety of abdominal dropsy, especially when the liver is the organ enlarged and filled with hydatids. Yet in this last case, the confusion is of less consequence as the general mode of treatment will not essentially vary. Pregnancy, when it first alters the shape, produces an enlargement immediately over the pubes, which progressively ascends, and when it reaches the umbilicus assumes a definite boundary. In the atonic or common variety of abdominal dropsy, the swelling of the belly is general and undefined from the first. And in dropsy of the ovary or ovaries, it commences laterally, on one or both sides, according as one or both ovaries are affected. And it is hence of the utmost importance to attend to the patient's own statement of the origin of the disease and the progressive increase of the swelling. It is generally moveable when the patient is laid on her back; and as the orifice of the

\* Saviard, *Observ. Chir. Engalenus*, p. 150.

uterus moves also with the motion of the tumour, by passing the finger up the vagina, we may thus obtain another distinctive symptom. Where there are several cysts in the ovary, we may perceive irregularities in the external tumour resembling, to the touch, those of schirrhus.

This disease is sometimes found in pregnant women, but far more commonly in the unimpregnated and the barren. It is also met with in the young and those who regularly menstruate, as well as in those whose term of menstruation has just ceased. The accumulation of fluid is often here also very considerable. Morand drew off four hundred and twenty-seven pints, within ten months\*; and Martineau four hundred and ninety-five within a year; and from the same patient six thousand six hundred and thirty-one pints by eighty punctures within twenty-five years†.

The disease commences, and indeed often continues for years, without much affection of the general health; yet it is insidious, and the constitution at length suffers and falls a prey to it.

Internal medicines have been rarely found efficacious, and when tried must consist of those already noticed in the treatment of cellular dropsy. Tapping affords the same ease as in abdominal dropsy, and the operation is to be performed in the same manner. I had lately a lady under my care for six or seven years, who required the operation to be performed at first every six months, afterwards every three months, and at length every month or six weeks. She rose from it extremely refreshed, and in good spirits; and often on the same evening joined a party of friends, and was sometimes present at a musical entertainment. In about six years, however, her health completely gave way, and she sunk under the disease.

So little, however, is the general health interfered with

GEN. I.  
SPEC. VI.  
Hydrops  
ovarii.

Dropsy of  
the ovary.  
Sometimes  
found in  
pregnant  
women:  
but more  
frequently  
in barren.

Found also  
in the  
young as  
well as in  
the old.

Quantity of  
of fluid con-  
siderable.

Disease  
little ob-  
served at  
first, but  
preys upon  
and at last  
undermines  
the general  
health.

Medical  
treatment.  
Internal  
medicines.  
Tapping:

affords  
rapid ease.

\* Mem. de l'Acad. de Chir. II. 448.

† Phil. Trans. 1784. p. 471.



GEN. I.  
SPEC. VI.  
Hydrops  
ovar.ii.  
Dropsy of  
the ovary.  
Treatment.  
Pregnancy  
occurring  
during the  
existence of  
the disease.  
Exempli-  
fied from  
Maclean.

for the first year or two, that the patient occasionally becomes pregnant, while the accumulation continues to increase, and often produces a living offspring. Sir L. Maclean, has given an interesting case of this kind, in which there was not only an extensive dropsy, but an abscess of the ovary, and a discharge of pus as well as of water on tapping which was performed five times during a single pregnancy. The patient passed easily through her labour, but died within five months afterwards upon a bursting of the abscess into the peritonæal sac. On examining the body, two pints of "a thick, brown, well digested pus were found to have escaped into the cavity of the abdomen, and three pints more in the ovarian sack. The opening was large enough to admit of three fingers; and the external surface of both the large and small intestines was found inflamed, and verging in some places on gangrene." This my learned friend ascribes to the influence of the pus that had escaped and was in contact with them\*: but as this is said to have been "well digested pus," the inflammation is, I think, more probably to be attributed to sympathy with the lacerated ovarium in its actual state of irritation from so large a rent, and so much larger an inflamed surface in its interior.

Fluid often  
lodged in  
cysts or  
hydatids.  
Hence  
great diffi-  
culty in  
puncturing  
success-  
fully.  
Illustrated.

The fluid is in this species also, sometimes lodged in a cyst, occasionally in many cysts, or perhaps hydatids, and there is great difficulty in ascertaining its exact situation, and consequently in puncturing it. A distinguished and skilful friend of the author's not long since made an attempt on a lady, who had been affected with the disease for some years; yet unfortunately not a drop of serum ensued, but instead of it a pint of blood. The swelling of the abdomen has since increased to an enormous size; internal medicines have proved of little avail, and she has not consented to another trial of the trocar. It was probably from an equal want of success that

---

\* Enquiry into the Nature, &c. of Hydrothorax. Appx. p. 1. 8vo. 1810.

Tozzetti long since declared the operation to be of no avail\*; and that Morgagni denounced it not only as useless but mischievous†. A more radical mode has been proposed, but so far as I know only proposed, that of extirpating the ovarium; which, however, for various reasons is‡ not likely to be brought into practice; De Haen regards such an operation as doubtful§, and Morgagni asserts it to be impossible||. Dr. Percival relates a case of cure produced by vomiting¶. Port-wine has been injected after evacuating the water, but a general inflammation is apt to succeed, and sometimes death\*\*.

GEN. I.  
SPEC. VI.  
Hydrops  
ovarij.  
Dropsy of  
the ovary.  
Treatment.  
Hence the  
operation  
declared by  
Tozzetti to  
be of no use.  
Extirpation  
of the ova-  
rium.  
Cure per-  
formed by  
vomiting.

## SPECIES VII.

### HYDROPS TUBALIS.

#### Dropsy of the Fallopian Tube.

HEAVY ELONGATED INTUMESCENCE OF THE ILIAC REGION, SPREADING TRANSVERSELY; WITH OBSCURE FLUCTUATION.

THIS species is not common. Dr. Baillie, however, among others, has particularly noticed and described it in his morbid anatomy, in a case referred to in the volume of Nosology. Its mode of treatment is that of dropsy of the ovary. Tapping may be attempted, but

GEN. I.  
SPEC. VII.  
Species  
rarely met  
with.  
Tapping  
may be  
tried but its  
success  
doubtful.

\* Osservazioni, &c.

† De Sed. et Caus. Morb. Ep. xxxviii. Art. 68, 69.

‡ N. Act. Nat. Cur. Vol. v. Obs. 49.

§ Rat. Med. P. iv. c. iii. § 3.

|| De Sed. et Caus. Morb. Ep. xxxviii. Art. 69, 70.

¶ Ep. ii. p. 156.

\*\* Denman, Introduct. to the Pract. of Midwifery. Ch. iii. Sect. xii.

GEN. I.  
SPEC. VII.  
Hydrops  
tubalis.  
Dropsy of  
the Fallo-  
pian tube.  
Quantity of  
fluid ex-  
ceeds that  
of the last.  
Exempli-  
fied.

Causes,  
progress  
and inter-  
nal treat-  
ment as  
under the  
last.

as the water lies frequently in the hydatid-vesicles or distinct sacs, success is doubtful.

The quantity collected is for the most part larger than in the ovarium. Munnik mentions a case in which the distended tube contained a hundred and ten pints of fluid\* ; Harder one in which the fluid measured a hundred and forty pints† ; and Cypriani another that afforded a hundred and fifty pints at a single tapping‡. Weiss describes a case of complicated dropsy distending both the ovarium and the Fallopian tube§.

The causes, and progress as well as general mode of treatment are those of dropsy of the ovary. Its chief distinctive symptom is the elongated line which the swelling assumes and the direction it takes towards the iliac region on the one side or on the other.

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## SPECIES VIII.

### HYDROPS UTERI.

#### Dropsy of the Uterus.

HEAVY, CIRCUMSCRIBED PROTUBERANCE IN THE HYPO-  
GASTRIUM, WITH OBSCURE FLUCTUATION; PROGRES-  
SIVELY ENLARGING, WITHOUT ISCHURY, OR PREG-  
NANCY; MOUTH OF THE WOMB THIN AND YIELDING  
TO THE TOUCH.

GEN. I.  
SPEC. VIII.  
Hydrome-  
tra of Sau-  
vages, who

SAUVAGES makes not less than seven species of this disease, which he calls hydrometra, and which with him oc-

---

\* Apud Manget.

† Apiar. Obs. 87, 88.

‡ Epistola historiam exhibens foetus humani ex Tuba excisi. Leid. 1700.

§ Abhandl. einer ungewöhnlichen Krankheit, &c. Rastadt. 1785.

curs as a genus. The distinctions, however, are of too little account to call for such a subdivision; and one or two of the species is doubtful: particularly the hydro-metra gravidarum, or dropsy of the womb during pregnancy. Dr. Cullen regards it as altogether unfounded, and hence makes the symptom of *citra graviditatem* a pathognomic character of the complaint.

The disease is rarely to be met with in the cavity of the uterus, and when this is the case the orifice is perfectly closed. It is much more frequently to be found in a particular cyst, or the walls of an hydatid, or a cluster of hydatids, or between the tunics of the organ. Carron ascribes it in various cases to a debility of the uterus produced by a chronic leucorrhœa\*. Other writers to the stimulus of pent-up, coagulated blood, sometimes assuming an encysted structure†. It is for the most part the result of a scirrhus or some other morbid change in the organ, producing debility and occasionally fever. A membranous or cellular dropsy is the variety most commonly assumed, in which the uterus is sometimes distended to an enormous size, and the abdomen seems to be laborious under an anasarca.

The water when in the cavity of the uterus, may often be evacuated by a canula introduced into the mouth of the organ; and if this should be prevented by a scirrhus, cicatrix, or tubercle lying over its mouth, a rupture of the sac in which the fluid is lodged may sometimes be produced by a violent shock of electricity passed through the hypogastric region, hard exercise or emetics.

A sudden fall has often had the same effect. Tozzetti relates a case of cellular dropsy of the womb which extended down the thigh and leg on one side; and disappeared by a spontaneous discharge of the water from the cuticle of the leg affected‡.

The uterus has also been said to be sometimes affected

GEN. I.  
SPEC. VIII.  
Hydrops  
uteri.  
Dropsy of  
the womb.  
makes the  
species nu-  
merous but  
not called  
for.

Often  
found in  
cysts:  
Supposed  
causes.

Medical  
treatment.

\* In Blegny, Zodiac, 1731.

† Act. Nat. Cur. Vol. vii. Obs. 61.

‡ Osservazioni, Mediche. Firenz. 1752.



GEN. I.  
SPEC. VIII.  
Hydrops  
uteri.  
Dropsy of  
the womb.

with dropsy in consequence of a conveyance of the water accumulated in the cavity of the abdomen in dropsy of the belly, into the uterine cavity by means of the fringed termination of the Fallopian tubes. Of this cause, however, there does not appear to be any satisfactory proof. "Yet I must confess," says Dr. Denman, "I have seen some cases of water collected, and repeatedly discharged from the uterus in the state of child-bed, which I was unable to explain on any other principle\*."

The internal treatment is that of the preceding species.

## SPECIES IX.

### HYDROPS SCROTI.

#### Dropsy of the Scrotum.

SOFT TRANSPARENT, PYRIFORM INTUMESCENCE OF THE SCROTUM ; PROGRESSIVELY ENLARGING, WITHOUT PAIN.

GEN. I.  
SPEC. IX.  
Hydrocele  
of Heister  
and others.

THIS is the hydrocele of Heister, and other writers: and offers the two following varieties:

- |   |   |
|---|---|
| <p>α Vaginalis.<br/>Vaginal dropsy of the<br/>scrotum.</p> <p>ε Cellularis.<br/>Cellular dropsy of the<br/>scrotum.</p> | <p>The fluid contained in the tunica vaginalis or surrounding sheath of the testis.</p> <p>The fluid contained in the cellular membrane of the scrotum.</p> |
|---|---|

The ordinary causes of the first variety are organic

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\* Introduct. to the Pract. of Midwifery, Ch. III. Sect. IX.

atony, and organic violence as a contusion, and perhaps repelled buboes. Van der Harr asserts that it occurs more frequently on the left than on the right side\*; and Jonston that it is never found on the latter†. Delattre describes a case of congenital affection‡.

The second variety takes easily the pressure of the finger, and is mostly an accompaniment of general cellular dropsy, or a prelude to it. If it be an idiopathic affection it may be removed by scarification.

The vaginal dropsy of the scrotum is the proper disease and is elastic to the touch. It sometimes takes place with great rapidity, and sometimes very slowly. The tunic is, in some cases, extremely distended, and the whole scrotum rendered transparent, so that a candle may be seen through its contents.

On the Malabar coast, Kœmpfer asserts, that the disease is endemic§; and the scrotum has been sometimes found to weigh sixty pounds||.

In recent cases, emetics have appeared peculiarly serviceable: and astringents and stimulants may be tried in the form of cataplasms or fomentations; as vinegar, with or without a solution of muriate of ammonia, or neutralized with volatile alkali. Though where there is much pain leeches should be previously applied. If this do not succeed the sac must be opened, and the fluid be evacuated by a lancet or the trochar. But the water soon re-accumulates, and the same palliative must usually be had recourse to three or four times a year. Van Swieten mentions the case of a dignified ecclesiastic who was obliged to have the operation performed every three months for twenty years in succession¶. And I had lately a patient who submitted to it as often, for many

GEN. I.  
SPEC. IX.  
α H. scroti  
vaginalis.  
Vaginal  
dropsy of  
the scro-  
tum.

β H. scroti  
cellularis.  
Cellular  
dropsy of  
the scro-  
tum.

The vaginal  
or first va-  
riety, the  
proper dis-  
ease.

Varies in  
the speed of  
its advance.

Tunic  
sometimes  
distended.  
Has weigh-  
ed sixty  
pounds.  
Medical  
treatment.

Emetics.

Astringent  
and other  
injections.

If these fail  
the sac to  
be opened:

but the  
water soon  
re-accu-  
mulates.

\* Waarneeminge.

† iv. 72.

‡ Journ. de Med. Tom. xxxii.

§ Amœnitat. Exotic.

|| Memoires de Paris. 1711. p. 30.

¶ Comment. ad § 252.

GEN. I.  
SPEC. IX.  
Hydrops  
scroti.  
Dropsy of  
the scro-  
tum.  
Treatment.  
The only  
radical  
cure an ob-  
literation of  
the cavity  
by exciting  
inflamma-  
tion.

Various  
modes of  
accom-  
plishing  
this.

Inflamma-  
tion con-  
fined to the  
tunica albu-  
ginea: as  
recom-  
mended by  
Ramsden  
and Wood.

years of the latter part of his life, though he did not live so long as Van Swieten's patient.

The only radical cure we are acquainted with is that of obliterating the cavity, by exciting an inflammation in the vaginal and albugineous tunics, or in the latter alone. By the first of these operations the two tunics adhere together, and, the cavity being destroyed, there can be no subsequent accumulation. Thus inflammation may be excited by a seton, a caustic, the introduction of an irritating fluid by means of a syringe, as brandy, diluted spirits of wine, or a solution of corrosive sublimate; or by incision. This was the ordinary plan pursued till of late years, and the particular modes of carrying it into effect were equally countenanced by surgeons of reputation.

For the latter and simpler process, or that which consists in confining the inflammation to the tunica albuginea, we have been chiefly indebted of late years to Mr. Ramsden, and Mr. Kinder Wood. The last, after evacuating the fluid, draws forward with a small hook "that portion of the tunica vaginalis presenting at the external opening, and cuts it away with a pair of scissors, immediately closing the external opening with adhesive plaster. By which means a moderate inflammation of the membrane will be insured, and I am led to hope," says the ingenious writer, "that the success will be frequent\*." In effect Mr. Wood gives various instances of complete success. The piece snipped off is very small, and very little inconvenience is suffered. The inflammation under this mode of operating is so inconsiderable as to be confined to the tunica vaginalis alone, and consequently the cavity between the two tunics is not obliterated as is obvious by the testis being still able to roll to a considerable extent within the scrotum. This plan, therefore, is best adapted for dropsies of recent standing, and where the sac is not much thickened and in-

\* Trans. of the Medico-Chir. Soc. Vol. ix. 49.

durated. In old and obdurate cases it will mostly be found necessary to carry the inflammation so far as to obliterate the cavity.

Mr. Wood does not seem to be aware that Mr. John Douglas employed a similar remedy as a radical cure in the cellular dropsy of the scrotum, and recommended it in his *Treatise on Hydrocele*, published in this metropolis in 1755. Celsus appears also to have glanced at the same in both kinds of dropsy\*.

In a case on which the author was consulted some few years ago, the patient, a gentleman far advanced in life, and who had been regularly tapped about once in three months for five or six years antecedently, found a considerable hemorrhage ensue shortly after the last operation, but which yielded on immersing the scrotum into water chilled to the freezing point. The hemorrhage, however, returned within two days, and the scrotum was again as much distended, though manifestly with blood, as before the trochar had been applied. It was clear that a pretty large artery had been accidentally wounded, or that the internal parts were in a very morbid condition. To ascertain the real fact, and put a stop to the discharge, the scrotal and vaginal tunics were immediately laid open from the top to the bottom, and a pretty strong pressure made between the testicle and the sides of the latter tunic with folds of lint which effectually restrained the hemorrhage, without the necessity of pausing to take up any vessel. On examining the organ more closely on the ensuing day, a foul and spongy ulcer was detected on the tunica albuginea, from which the hemorrhage had proceeded: by a course of warm digestive dressing, however, both the wound and the ulcer healed, and a radical cure of the dropsy was completely accomplished†.

GEN. I.  
SPEC. IX.

Hydrops  
scroti.

Dropsy of  
the sero-  
tum.

Treatment.

Similar  
plan for-  
merly pro-  
posed by  
Douglas;

perhaps by  
Celsus.

Complicated case  
in which  
both tunics  
were laid  
open.

\* De Medicin. Lib. vii. cap. 21.

† See, for a case somewhat similar, Edin. Med. Ess. II. Art. xiv. by Mr. Jamieson.



GEN. I.  
SPEC. IX.  
Hydrops  
scroti.  
Dropsy of  
the scro-  
tum.  
Treatment.  
Clitoris  
sometimes  
affected  
with a like  
dropsy.

The clitoris has sometimes been found affected with the second or cellular variety, and acquired a considerable size. The earliest writer who seems to have noticed this sort of dropsy is Aëtius\*; and it has since been described or adverted to by Van Swieten†, Saviard‡, Manoury§, and various others under the name of hydrocele *muliebris* or *fœminina*.

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\* Tetrab. iv. Serm. II. c. 22. Serm. iv. c. 100.

† Comment. ad § 1227.

‡ Nouveau Recueil, &c.

§ Journ. de Med. 1790.

## G E N U S II.

## EMPHYSEMA.

**Inflation. Wind-dropsy.**

ELASTIC AND SONOROUS DISTENTION OF THE BODY OR ITS MEMBERS, FROM AIR ACCUMULATED IN NATURAL CAVITIES, IN WHICH IT IS NOT COMMONLY PRESENT.

THE term EMPHYSEMA is derived from ἐμ or ἐν and φυσάω “inflo” “flatu distendo.” It has often been made a question by what means the air is obtained in various cavities, in which it is found in great abundance; for we cannot always trace its introduction from without, nor ascribe it to a putrefactive process. Fantoni found air seated between the tunics of the gall-bladder, and Hil-danus in the muscles. “In one instance,” observes Mr. J. Hunter, “I have discovered air in an abscess which could not have been received from the external air; nor could it have arisen from putrefaction\*.” The case is singular and well entitled to attention, but too long to be copied. From this and various other circumstances, Mr. Hunter conceived the opinion that air is often secreted by animal organs, or separated from the juices conveyed to them: and he appeals, in confirmation of this opinion, to the experiments of Dr. Ingenhouz upon vegetables. I have not had an opportunity of reading these experiments, but that such a sort of secretion exists in plants must be obvious to every one who carefully ex-

GEN. II.  
Origin of  
generic  
term.

Air found  
in various  
cavities  
whose  
entrance  
cannot be  
traced from  
without.

Supposed  
by J. Hun-  
ter to be  
secreted  
from the  
juices of  
the blood.

Phytologi-  
cal facts in  
confirma-  
tion of this  
opinion.

\* Anim. Econ. p. 207.

GEN. II.  
Emphysema.  
Inflation.  
Wind-dropsy.  
Other facts in support of the same derivable from animal physiology.  
Cuttle-fish.  
Nautilus.

Sound or air-bladder of fishes how supplied.

Microscopic experiments of Bauer on the formation of vegetable down or hair.  
Experiments of Brande on

amines the inflated legume of the different species of bladder-senna, (colutea,) and the capsules of several other shrubs quite as common in our gardens, and which can only become inflated by a separation or secretion of air from the surrounding vessels. Yet an appeal to a variety of curious facts in the economy of numerous animals will perhaps answer the purpose much better, as leading us more directly to the point. The *sepia officinalis*, or cuttle-fish, and the argonauta *Nautilus*, the ordinary parasitic inhabitant of which—for we do not know the animal that rears the shell,—has a very near resemblance to the cuttle-fish, and as suspected by Rafinesque, and since determined by Cranch, is a species of ocythœ\*, introduce air at option into the numerous cells of the back-bone, and thus render themselves specifically lighter whenever they wish to ascend from the depths of the sea to the surface; and, in like manner, exhaust the back-bone of its air, and thus render themselves specifically heavier whenever they wish to descend. All fishes possessing a sound or air-bladder are equally capable of supplying this organ with air, first for the purpose of balancing themselves, and next apparently for that of raising themselves towards the surface. In all these cases the air, thus introduced and accumulated appears to be a direct secretion: at least we cannot otherwise account for its presence, as we can easily do in the bones of birds whose cells are filled with air; for we can here trace an immediate communication with the air-cells of the lungs.

Mr. Bauer has lately shown that a gass is constantly shooting forth in small bubbles from the roots of plants into the slimy papulæ by which they are surrounded; and that it is by this mean that the slimy matter becomes elongated, is rendered vascular, and converted into hair or down. Mr. Brande has also shown that gass, meaning hereby carbonic acid gass, exists in a considerable

\* Phil. Trans. 1817, p. 293.

quantity in the blood while circulating in the arteries and veins, and is very largely poured forth from blood placed, while warm, under the receiver of an air-pump, so as to give an appearance of effervescence. He calculates that two cubic inches are extricated from every ounce of blood thus experimented upon, the venous and arterial blood containing an equal proportion. And Sir Everard Home, has hence ingeniously conjectured that it is by the escape of bubbles of this gass through the serum, in cases of coagulated blood, that new vessels are formed, as also that granulations are produced in pus; from which it appears that the same gass escapes with equal freedom.

These results of Mr. Brande, upon the same subject, are in perfect accordance with the well known experiments of Dr. Hales and Baron Haller, which of late years appear to have been too much neglected, if not discredited. The former asserts that in distilling blood, a thirty-third part of the whole proved to be air: and the latter confirms the assertion; “utique,” says he, “fere trigesima tertia pars totius sanguinis verus est aër.” From all which we may reasonably conjecture that the body of air found in many cases, of perhaps all the species of emphysema, is produced, like other fluids found in the different cavities of the animal frame, by a process of secretion. These species are three, and are as follow:

1. EMPHYSEMA CELLULARE. CELLULAR INFLATION.
2. ———— ABDOMINIS. TYMPANY.
3. ———— UTERI. INFLATION OF THE WOMB.

There are probably many others—but these are the only ones which have been hitherto distinctly pointed out.

GEN. II.  
Emphysema.  
Inflation.  
Wind-dropsy.  
blood,  
showing the  
existence of  
air in this  
fluid.  
Illation of  
Home from  
these facts.

Preceding  
experi-  
ments of  
Hales and  
Haller.



## SPECIES I.

## EMPHYSEMA CELLULARE.

## Cellular Inflation.

TENSE, GLABROUS, DIFFUSIVE INTUMESCENCE OF THE SKIN, CRACKLING BENEATH THE PRESSURE OF THE FINGER.

GEN. II.  
SPEC. I.  
The pneumatosis of some writers.

THIS is the pneumatosis of Sauvages and Cullen, and consists in a distention of the cellular membrane by air instead of by water, as in *hydrops cellularis* or *anasarca*. The distention is sometimes limited to particular parts of the body, and sometimes extends over the entire frame.

From the remarks we have just offered on the probable separation or secretion of air from the blood, this disease may originate from various causes, and exhibit itself under various modifications : but the two following are the only extensive forms under which it has hitherto been traced :

- |                       |   |
|-----------------------|---|
| α A vulnere thoracis. | From a wound in the chest,                                |
| Traumatic Emphysema.  | with sense of suffocation.                                |
| ε A veneno.           | From fish-poison or other                                 |
| Empoisoned Emphysema. | venom ; with extensive signs of gangrene and putrescency. |

α E. cellulare à vulnere thoracis.  
Traumatic emphysema.  
Pathology.

For the FIRST OF THESE VARIETIES there is no great difficulty in accounting. If a wound so far penetrate the chest as to enter any part of the lungs, and divide some of the larger branches of the bronchiæ, the inspired air, instead of being confined to its proper channels, will rush immediately into the chest and fill up its whole cavity ; as it will also into the cellular membrane of the lungs, from

which it will find a passage into the cellular membrane of the entire body, and produce an universal inflation.

This last effect is highly troublesome and distressing: but the first is productive of the utmost alarm. The lungs compressed on every side by the extravasated air, are incapable of expansion: and there is consequently an instantaneous danger of suffocation. The patient labours for breath with all his might, and labours to but little purpose; his cheeks are livid, his senses soon become stupefied, and, without speedy relief, death must inevitably ensue. The distress is moreover sometimes aggravated by the excitement of a cough, in the fits of which, if any considerable blood-vessel have been burst, blood is expectorated along with the rejected mucus.

Mr. Kelly, in the Edinburgh Medical Commentaries, has given a very singular case of this affection from another cause, which we will presently explain. The patient almost fifty-seven years of age, had long laboured under a chronic cough and difficulty of breathing. The emphysema began to appear on the second day after a most violent fit of coughing, laborious respiration and pain in the side. It soon covered the whole right side to the scrotum which was also much inflated, producing a crackling sound upon pressure; and, gradually widening its course, by the fourth day it extended over the whole body. It was at first conceived that air had entered from without into the cellular membrane by means of some wound in the side; but no such injury or any other channel of communication could be discovered. The symptoms, however, were so pressing that it was at length determined, under the advice of Dr. Munro, to afford an escape for the air, by an opening into the cavity of the chest. The pleura was in consequence tapped; when upon withdrawing the perforator, such a blast of wind issued through the canula, as to blow out a lighted candle three or four times successively. The patient immediately became easy and free from oppression, and his pulse fell from above a hundred strokes in a minute to ninety. Punctures were at the same time made into the

GEN. II.  
SPEC. I.  
α E. cellu-  
lare à vul-  
nere tho-  
racis.  
Traumatic  
emphyse-  
ma.  
Descrip-  
tion.

Exempli-  
fied by a  
singular  
case.

GEN. II.  
SPEC. I.  
E. cellulare à vulnere thoracis.  
Traumatic emphysema.  
Treatment.

cellular membrane in different parts of the body, and from these also the imprisoned air puffed out upon pressure but not otherwise. The patient recovered gradually, and in about three weeks ate and slept as well as he had done at any time for thirty years before. For nearly a twelvemonth he continued to enjoy a good state of health; but about the close of this period was again attacked with a cough, a pain in the chest, and a difficulty of breathing; a hectic fever followed, and he died in about six weeks. On opening the thorax, Mr. Kelly tells us, that he found the lungs "in a very putrid diseased state, with some tubercles on the external surface of the right lobe; there was extensive adhesion to the pleura, particularly at the place where the pain had been felt most keenly before the perforation; and, on making an incision into the right lobe, an abscess was discovered which contained about four ounces of fetid purulent matter\*." We are hence, I think, led to conjecture that the emphysema was in this case produced by the bursting of a former abscess in the right lobe of the lungs, accompanied with a rupture of one or more of the bronchial vessels, in consequence of which the same effect followed as if a wound had been inflicted from without.

Explanation of the above case.

Paracentesis how to be performed as recommended by Hewson.

Where it is necessary to evacuate the air from the cavity of the chest, by an artificial opening, the operator cannot do better than follow the example of Mr. Hewson who employed a scalpel, and introduced it into the fore-part of the thorax, either on the right or left side; but between the fifth and sixth ribs in the former case, because here the integuments are thin; and between the seventh and eighth, or the eighth and tenth in the latter, for the purpose of avoiding the pericardium.

E. cellulare à veneno.  
Cellular emphysema from poison.

The inflation which follows so suddenly and so extensively in the SECOND VARIETY, or upon the introduction of fish-poison, or that of several species of the mushroom or numerous other edible venoms into the stomach, it is

\* Edin. Med. Comment. Vol. III. p. 427.

not so easy to account for. In most of the cases there is so violent and general a disturbance of every function, as to produce extreme and instantaneous debility; all the precursors of putrescency are present, and speedy dissolution is threatened. Every part of the body is swollen and inflated, particularly the stomach and intestines, the vapour of which, when examined after death, is found to consist of a fetid and putrid gass: a blackish and greenish froth is discharged from the mouth; clonic or tetanic spasms play wildly over all the muscles; the chest labours with suffocation, the brain is stupefied, and broad, livid or gangrenous spots spread over the body; and on dissection are found still more freely, and of larger diameter on the surface of most of the thoracic and visceral organs.

If then, in a state of undisturbed organization, many parts of the body have a power of secreting or separating air from the blood, as we have endeavoured to show in the introductory remarks to the present genus, how much more readily may we suppose such a separation to take place in proportion as the organs approach that precise state in which the gasses of the blood extricate themselves spontaneously from its other constituents. And it may be added that this explanation is confirmed by our perceiving that the most effectual remedies against all such inflations are the most powerful antiseptics we can employ: as acids, alcohol, and the aromatics.

In few words, we never cease to find a free extrication of air whenever the body or any part of it is running rapidly into a state of putrefaction: and hence another cause of cellular emphysema, and a cause that is perpetually occurring to us in gangrene.

GEN. II.  
SPEC. I.  
6 E. cellulæ à veneno.  
Cellular emphysema from poison.  
General description.

Production of air explained and accounted for.

Hence gangrene a cause of cellular emphysema.



## SPECIES II.

## EMPHYSEMA ABDOMINIS.

**Tympany.**

TENSE, LIGHT, AND EQUABLE INTUMESCENCE OF THE BELLY; DISTINCTLY RESONANT TO A STROKE OF THE HAND.

GEN. II.  
SPEC. II.  
The tympanites of authors.

THIS disease is the tympanites of authors, so called from the drum-like sound which is given on striking the belly with the hand.

There have been many occasions of observing that the Greek termination *itis* or *ites*, is, for the sake of simplicity and perspicuity, confined, in the present system, to the different species of a single genus of diseases, that of EMPRESMA, of which we have treated already\*: and hence, as well as for other reasons sufficiently obvious, the specific term before us has been selected in its stead.

Tympanites intestinalis of Sauvages—the only tympanites of Cullen:

Tympanites, however, is by most writers applied principally to an enormous collection or evolution of air in some part or other of the alvine canal, constituting the tympanites *intestinalis* of Sauvages: and it is to this disease alone that Dr. Cullen confines his attention, when treating of the subject in his First Lines. This flatulent distention he ascribes to an atony of the muscular fibres of the intestines, accompanied with a spasmodic constriction in parts of the canal; by which means the passage of the air, is, in some places, interrupted. In this view of the case, however, tympany, instead of being entitled to the rank of a distinct genus, is nothing more

in which case the disease is a mere sym-

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\* Vol. II. Cl. III. Ord. II. Gen. VII. p. 316.

than a symptom or sequel of some other enteric affection, as dyspepsy, colic, worms, or hysteria: and hence the remedies applicable to these are what Dr. Cullen recommends for tympanites—namely, avoiding flatulent food, laxatives, and tonics.

Mr. John Hunter seems to have conceived that a tympany of the stomach or intestines may exist as an idiopathic complaint. “I am inclined,” says he, “to believe that the stomach has a power of forming air and letting it loose from the blood by a kind of secretion. We cannot, however, bring any absolute proof of this taking place in the stomach, as it may in all cases be referred to a defect in digestion; but we have instances of its being found in other cavities where no secondary cause can be assigned\*.” He alludes chiefly to an extrication of air in the uterus, which we shall have occasion to notice in our next species.

In concurrence with these remarks it may, also, be observed, that some persons are said to have a power of producing ventricular distentions voluntarily, which it is difficult to account for except by a voluntary power of secreting air for this purpose, or forcing it down the esophagus, which will be still less readily allowed. Morgagni† and other writers have hence treated of this form of the disease as well as of that in which the flatus is lodged in the peritonæal sac: while others have contended that this is the only form, and that a peritonæal tympany has no real existence‡.

If an idiopathic tympany of the stomach should ever be decidedly ascertained, its cure must be attempted by the remedies for flatus of any other kind: but at present the only disease we can fairly contemplate as entitled to the name of tympanites, or emphysema *abdomi-*

GEN. II.  
SPEC. II.  
Emphysema abdominis.  
Tympany.  
ptom of  
some other  
affection.  
The disease  
may exist,  
as conjectured by  
Hunter,  
as an idiopathic  
affection.

Opinion  
supported  
by facts,

and the  
opinion of  
other pa-  
thologists.

The ques-  
tion not  
fully set-  
tled: and  
hence the  
only known  
emphysema abdominis,

\* On the Animal Econom. p. 206. 4to. 1792.

† De Sed. et Caus. Morb. Ep. xxxviii. Art. 23.  
Collect. Soc. Med. Havn. ii. p. 73.

‡ Litre, Mem. de l'Acad. des Sciences, 1713. p. 235.

GEN. II.  
SPEC. II.  
Emphyse-  
ma abdo-  
minis.  
Tympany.  
that exist-  
ing in the  
sac of the  
perito-  
næum.

Even this a  
rare disease,  
but stated  
to have oc-  
curred by  
high au-  
thorities.

Ordinary  
natural  
cure an  
escape of  
the air by  
an acci-  
dental out-  
let which  
has occur-  
red in va-  
rious ways.  
Hence tap-  
ping useful,  
and the um-  
bilicus may  
be punc-  
tured.  
Belly at  
at the time  
to be  
swathed.

nis, notwithstanding the incredulity of some practitioners, is that in which the resonant swelling of the belly is produced by air collected in the sac of the peritonæum. It is unquestionably a rare disease, though we must contend, in the language of Dr. Cullen, that, "from several dissections it is unquestionable that such a disease has sometimes truly occurred:" nor can we suppose such accurate and cautious pathologists as Heister \*, Lieutaud †, and Bell ‡, who have respectively given examples of it, to have been successively deceived upon the subject. Admitting it to be produced by secretion, its occasional causes are still very obscure. It has been said to follow upon jaundice, and morbid affections of other abdominal viscera, upon debility produced by fever; upon hysteria, violent passions or other emotions of the mind: and probably all these may have operated in different cases.

The ordinary natural cure seems to consist in an escape of the air from the umbilicus by an outlet produced by an abscess or ulceration of this protuberant organ, or a sudden and fortunate rupture of its integuments. Morgagni and several later writers§ give us well authenticated cases of an occurrence of the first of these, and Stoerck of both ||. We are thus led by nature herself to try the effects of tapping, or making an artificial opening into the cavity of the abdomen in the case of wind-dropsy, as well as in that of water-dropsy: and here, from the protruded state of the umbilicus, the lancet may conveniently be introduced at this point. The belly should, at the time of the operation, be well swathed with a broad girth, which may be tightened at option, and should be kept as tight as the patient can bear it, as well

\* Wahrnehmungen. i. Art. 15.

† Hist. Anat. v. p. 432.

‡ On Ulcers and Tumours. Vol. II.

§ Guisard, Practique de Chirurgie. Tom. I. p. 134.

|| Ann. Med. II. p. 190, 193, 194.

for the purpose of general support as for that of expelling the air within, and preventing the entrance of air from without.

Van Swieten dissuaded his pupils from this operation \*; and Cembalusier †, and a few others have since asserted that it does not answer. But in most of these cases we have reason to believe that the seat of the disease was mistaken, and that the flatulency existed in the intestinal canal rather than in the peritonæal sac.

Antecedently, however, to the operation of the paracentesis, we may try the effect of sending shocks of the electric aura through the abdomen. Cold fomentations, moreover, or even pounded ice may be applied externally, and gelid drinks, reduced nearly to the freezing point, be swallowed copiously at the same time. This plan is said to have answered occasionally ‡. And it is obvious that a tonic regimen, with free exercise, and particularly equitation, and, where it can be had recourse to, sea-bathing, should be entered upon as soon as the tympany is dispersed.

There is a singular case of flatulent distention inserted in the Edinburgh Medical Essays, by Professor Monro, which is called a tympany, but does not seem to have been exterior to the intestinal canal; and hence, if a tympany at all, must have been produced by a secretion of air into the stomach or bowels, as conjectured by Mr. J. Hunter. The patient was a young woman aged twenty-two. The inflation continued for at least three months, the belly being sometimes so extremely distended as to endanger its bursting, and sometimes considerably detumefied, at which last period a variety of unequal and protuberant balls were felt all over the abdomen, and seemed to indicate so many intestinal constrictions. The patient's appetite continued good, she was

GEN. II.  
SPEC. II.  
Emphysema abdominis.  
Tympany.  
Operation opposed by Van Swieten and others as not answering; but probably the seat of the disease mistaken in the cases referred to.  
Shocks of electricity, Cold fomentations, pounded ice, and gelid drinks,

Complicated case of abdominal inflation, but apparently not a real tympany, related by Monro.

\* Ad Sect. 1251.

† Pneumatopathol. p. 503.

Dusseau, Journ. de Med. 1779.

‡ Theden, N. Bemerkungen und Erfahrungen, II. p. 251.



GEN. II.  
SPEC. II.  
Emphyse-  
ma abdo-  
minis.  
Tympa-  
ny.

very costive, and menstruated only at intervals of several months. She was at length attacked with borygmi, and a day or two afterwards had such explosions of wind *ἄνω καὶ κάτω*, that none of the other patients would remain in the same room, and hardly on the same floor with her. From this time she recovered gradually\*.

### SPECIES III.

## EMPHYSEMA UTERI.

### Inflation of the Uterus.

LIGHT, TENSE, CIRCUMSCRIBED PROTUBERANCE IN THE HYPOGASTRIUM; OBSCURELY SONOROUS; WIND OCCASIONALLY DISCHARGED THROUGH THE MOUTH OF THE UTERUS.

GEN. II.  
SPEC. III.  
The physo-  
metra of  
authors.  
An unfre-  
quent com-  
plaint,  
and hence  
denied by  
some wri-  
ters.

Description  
by Den-  
man.

THIS is the physometra of Sauvages and later nosologists. Like the last species, it is by no means a frequent complaint, and not easy to be accounted for except upon the principle of a secretion of air: and hence the existence of this species as well as of the last has been denied by several writers who do not happen to have met with examples of it. The description given of it is somewhat obscure in most of the pathologists, but there seems, upon the whole, sufficient reason for admitting it into the list of morbid affections. "It has been said," observes Dr. Denman, "that wind may be collected and retained in the cavity of the uterus till it is distended in such a manner as to resemble pregnancy, and to pro-

\* Edin. Med. Essays, Vol. I. Art. xxxi.

duce its usual symptoms; and that by a sudden eruption of the wind, the tumefaction of the abdomen has been removed, and the patient immediately reduced to her proper size. Of this complaint I have never seen an example: but many cases have occurred to me of temporary explosions of wind from the uterus which there was no power of restraining \*."

GEN. II.  
SPEC. III.  
Emphyse-  
ma uteri.  
Inflation of  
the womb.

The uterus is one of those organs referred to under our last species, as supposed by Mr. John Hunter to have a power of secreting or separating air from the blood: and, as he has examined the subject with critical attention in direct reference to the present complaint, his remarks are particularly entitled to our attention. "I have been informed," says he, "of persons who have had air in the uterus or vagina without having been sensible of it but by its escaping from them without their being able to prevent it: and who, from this circumstance, have been kept in constant alarm lest it should make a noise in its passage, having no power to retard it, as when it is contained in the rectum. The fact being so extraordinary made me somewhat incredulous; but rendered me more inquisitive in the hope of being enabled to ascertain and account for it: and those of whom I have been led to inquire, have always made the natural distinction between air passing from the vagina and by the anus: that from the anus they feel and can retain, but that in the vagina they cannot; nor are they aware of it till it passes. A woman, whom I attended with Sir John Pringle, informed us of this fact, but mentioned it only as a disagreeable thing. I was anxious to determine if there were any communication between the vagina and rectum, and was allowed to examine, but discovered nothing uncommon in the structure of these parts. She died some time after; and being permitted to open the body I found no disease either in the vagina or the uterus. Since that time I have had opportunities of inqui-

History of  
the disease  
accurately  
examined  
into by  
Hunter.

\* Introduction to the Practice of Midwifry. Chap. III. Sect. x.

GEN. II.  
SEEC. III.  
Emphyse-  
ma uteri.  
Inflation of  
the womb.  
By what  
means the  
air becomes  
pent up.

By spasm,  
or a coagu-  
lum of  
blood, or  
other vis-  
cous mate-  
rial seated  
at the  
mouth of  
the womb.

Illustrated.

Pains, si-  
mulating  
those of la-  
bour, how  
accounted  
for.

ring of a number of women concerning this circumstance, and by three or four have been informed of the same fact, with all the circumstances above mentioned \*."

The only difficulty in the case is the means by which air can thus become accumulated in the cavity of the uterus; for admitting this fact, of which there can no longer, I should think, be any doubt, we can easily conceive a distention to the utmost power of the organ in consequence of an obstruction of the mouth of the womb from spasm, a coagulum of blood, or any other viscid material. And hence, in all the cases of this disease which have descended to us, we find such a closure described as existing whenever the organ has been examined. Thus, in the instance related by Eisenmenger †, we are told that the uterus was completely impervious; and a like account is given of a similar instance recorded in the *Ephemera of Natural Curiosities*. *Palfin* ‡ gives a case in which the obstruction proceeded from an hydatid cyst that had fixed at the mouth of the uterus, and *Fernelius* § another in which the obstruction, and consequently the inflation, returned periodically. *Dr. Denman* intimates that this affection is sometimes accompanied with spasmodic pains, resembling those of labour: and the same remark will apply to dropsy of the womb which so much resembles it. The fact is that the uterus, when once enlarged by whatever means, and stimulated, has a natural tendency to run into a series of expulsive exertions in order to free itself from its burthen, and to excite all the surrounding muscles into the same train of action; and hence, natural labour, false conception, uterine dropsy and inflation produce the same effect, though, perhaps, in different degrees.

\* *Animal Economy*. p. 406. 4to. 1792.

† *Collect. Historia foetus Mussi-pontani, &c.*

‡ *Description des parties de la femme qui servent à la generation*.  
Leid. 1708.

§ *Patholog. Lib. iv. Cap. xv.*

Emphysemas, like dropsies, are, in all cases, disorders of debility: and hence the mode of treatment in the disease before us is obvious. As an occasional discharge of wind from the vagina affords temporary ease, we should take a hint from this effect: and endeavour, first, to evacuate the confined air entirely, by a canula introduced into the os tincae; and secondly, to invigorate the weakened organ by the use of some tonic injection, as a solution of catechu, alum, white vitriol, or diluted port wine.

GEN. II.  
SPEC. III.  
Emphysema uteri.  
Inflation of the womb.  
Mode of treatment.



## GENUS III.

## PARURIA.

## Mismicturition.

## MORBID SECRETION OR DISCHARGE OF URINE.

GEN. III.  
Origin of  
generic  
term.

Range of  
the division.

Dysuria,  
why not  
employed.

THE term PARURIA is a Greek derivation from *παρά*, *per-*peram, and *οὐρέω*, “mingo.” The genus is intended to include the ischuria, dysuria, pyuria, enuresis, diabetes, and several other divisions and subdivisions of authors, which, like the different species of the preceding genus, lie scattered, in most of the nosologies through widely different parts of the general arrangement. Thus, in Cullen, diabetes occurs in the second class of his system; enuresis in the fourth order of his fourth class; and ischuria, and dysuria, in the fifth order of the same class. All these, however, form a natural group; and several of them have characters scarcely diversified enough for distinct species, instead of forming distinct genera. DYSURIA might have been employed instead of PARURIA, as a generic term for the whole; but as it has been usually limited to the third species in the present arrangement, it has been thought better to propose a new term than to run the risk of confusion by retaining the old term in a new sense.

The species that justly belong to the present genus appear to be the following:

- |                     |                       |
|---------------------|-----------------------|
| 1. PARURIA INOPS.   | DESTITUTION OF URINE. |
| 2. ——— RETENTIONIS. | STOPPAGE OF URINE.    |
| 3. ——— STILLATITIA. | STRANGURY.            |
| 4. ——— MELLITA.     | SACCHARINE URINE.     |

5. PARURIA INCONTINENS.	INCONTINENCE OF URINE.	GEN. III.
6. ——— INCOCTA.	UNASSIMILATED URINE.	Paruria.
7. ——— ERRATICA.	ERRATIC URINE.	Mismictu- ritiou.

From this group of family diseases we may perceive that the urine is sometimes deranged in its quantity, sometime in its quality, and sometimes in its outlet: and that in its quality it is deranged in two ways, by being made a medium for foreign materials, and by being imperfectly elaborated. The most important principle which it seems to carry off from the constitution is the urea or that of the uric acid: and it has been ingeniously remarked by M. Berard, in his Analysis of Animal Substances, "That, as this is the most azotised of all the animal principles, the secretion of urine appears to have for its object a separation of the excess of azote from the blood, as respiration separates from it the excess of carbone."

General  
character  
of the spe-  
cies.

## SPECIES I.

### PARURIA INOPS.

#### Destitution of Urine.

URINE UNSECRETED BY THE KIDNEYS: NO DESIRE TO  
MAKE WATER, NOR SENSE OF FULNESS IN ANY PART OF  
THE URINARY TRACK.

A DEFICIENT secretion of urine is often a result of renal inflammation, in which case, however, there is necessarily a considerable degree of pain and tenderness in the lumbar region. But the present species occurs occasionally as an idiopathic affection, sometimes followed rapidly by great danger to the general fabric, sometimes assuming a chronic form, and running on for a consider-

GEN. III.  
SPEC. I.  
Occurs  
from renal  
inflamma-  
tion.  
How differs  
idiopathi-  
cally under  
various  
forms.

GEN. III.  
SPEC. I.  
Paruria  
inops.  
Destitution  
of urine.  
No urine  
secreted  
apparently  
for six  
weeks.  
Twenty-two  
weeks.  
No urine  
passed from  
birth.

Deficiency  
accounted  
for by an  
increased  
discharge  
from other  
outlets.

Skin and  
bowels the  
most com-  
mon sub-  
stituted  
emuncto-  
ries.

able period of time without danger, and sometimes existing as a constitutional affection coeval with the birth of the individual.

Dr. Parr relates a case that occurred in his own practice in which no urine was apparently secreted for six weeks\*, and Haller gives a similar case that lasted twenty-two weeks†. In the Philosophical Transactions‡ we meet with various instances of a similar deficiency; among the most singular of which is the case of a youth of seventeen years of age described by Dr. Richardson, who had never made water from his birth, nor had felt the least uneasiness on this account, being healthy, vigorous, and active.

Let it not be supposed, however, that so important a recrement as the urine is can have its constituent principles remain behind, and load the blood without danger. The outlet at which these are separated and discharged is not always manifest, and hence they sometimes appear not to be separated and discharged at all; though if the state of the patient be critically examined into by an accurate pathologist, the vicarious channel will generally be detected, and most of the cases that must at present range under the species before us, would be transferred to that of *paruria erratica*.

The two most common emunctories that supply the place of the kidneys are the skin and the bowels. In Dr. Parr's case, he states that there was no vicarious evacuation, except a profuse sweat for a day or two, and he adds that there was no suspicion of imposture, as the patient was in a hospital and constantly watched. But we have no account of the state of the bowels. In Dr. Richardson's case of a natural destitution of urine, the patient is admitted to have laboured under an habitual diarrhœa, though with little uneasiness, and the dis-

\* Dict. in verb. Ischuria.

† Bibl. Med. Pr. II. p. 200.

‡ Vol. XXVIII. year 1783.

charge of the urinary elements is very correctly ascribed to the intestinal flux.

The effects that result from a retention of the urinary elements in the system, are a loss of energy and a growing torpitude in every function, proving that the sensorium is directly debilitated, and rendered incapable of secreting its proper fluid. It is, hence, to be expected that the brain should evince torpitude in a greater degree than any other organ, and become oppressed and comatose, as though in a state of apoplexy. Nor is it difficult to account for these effects, since they naturally follow from having the blood surcharged with that excess of azote which, as we have just observed, it appears to be the office of the urine to carry off. The destructive power of azotic gass to animal life is known to every one, as is also its further power of increasing the coagulability of the blood.

I do not know, however, that the great and pressing danger of having the constituent principles of the urine thrown back into the blood, have been distinctly pointed out by any physician before the appearance of Sir Henry Halford's valuable article in a late volume of the Medical Transactions which contains the following interesting case: "A very corpulent robust farmer, of about fifty-five years of age, was seized with a rigor which induced him to send for his apothecary. He had not made water, it appeared, for twenty-four hours; but there was no pain, no sense of weight in the loins, no distention in any part of the abdomen, and therefore no alarm was taken till the following morning when it was thought proper to ascertain whether there was any water in the bladder, by the introduction of the catheter; and none was found. I was then called, and another inquiry was made, some few hours afterwards, by one of the most experienced surgeons in London, whether the bladder contained any urine or not, when it appeared clearly that there was none. The patient sat up in bed and conversed as usual, complaining of some nausea, but of nothing material in his own view; and I remember that

GEN. III.

SPEC. I.

Paruria

inops.

Destitution  
of urine.Effects of a  
retention of  
urine.Stupor of  
the brain:  
accounted  
for.Illustrated  
from Hal-  
ford.



GEN. III.  
SPEC. I.  
Paruria  
inops.  
Destitution  
of urine.

his friends expressed their surprise that so much importance should be attached to so little apparent illness. The patient's pulse was somewhat slower than usual, and sometimes he was heavy and oppressed. I ventured to state that if we should not succeed in making the kidneys act, the patient would soon become comatose and would probably die the following night; for this was the course of the malady in every other instance which I had seen. It happened so; he died in thirty hours after this, in a state of stupefaction\*."

Additional  
illustration.

To this short history, Sir Henry has added the following remarks which are of too much importance to be omitted. "All the patients who have fallen under my care were fat corpulent men between fifty and sixty years of age: and in three of them there was observed a strong urinous smell in the perspiration twenty-four hours before death;" evidently proving that in these cases the instinctive or remedial power of nature, aided by the constitutional vigour of the respective patients, was endeavouring to convert the exhalants of the skin into a substitute for the palsied kidneys, but was not able completely to succeed.

Remedial  
process.

In attempting a cure of *paruria inops* we ought, in the first instance, whatever be its cause, to take a hint from the light of nature which is thus thrown upon us: and, as the excretories of the skin and of the kidneys are so perpetually assisting each other in almost every way, excite the former by active diaphoretics to take upon themselves for a time the office of the latter, and carry off the urea that should be discharged by the kidneys.

Diapho-  
retics.

Diuretics.

We should next endeavour to restore the kidneys to their natural action by gentle stimulants or diuretics, as the alliaceous and siliquose plants, especially horse-radish and mustard, the aromatic resins and balsams, especially those of turpentine, copaiba, and the essential oil of juniper. *Digitalis* is of little avail, and in idiopathic dis-

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\* Med. Trans. Vol. vi. p. 410.

eases of the kidneys does not often exhibit a diuretic effect. If given at all it should be in conjunction with tincture of lytta, or the spirit of nitric ether.

Stimulants may, at the same time, be applied externally as the hot-bath, or strokes of the electric or voltaic fluid passed through the loins; to which may succeed rubefacients and blisters.

In the mean while the alvine canal should be gently excited by neutral salts; and juniper-tea, broom-tea, or imperial, may alternately form the common drink. The juice of the birch-tree (*betula alba*) will often, however, prove a better diuretic than any of these. It is easily obtained by wounding the trunk, and when fresh is a sweetish and limpid fluid, in its concrete state affording a brownish manna. It has the advantage of being slightly aperient as well as powerfully diuretic. From its stimulating the intestines it was at one time supposed to be a good vermifuge, and to have various other properties of which, in the present day, we know nothing: whence it has unjustly fallen into discredit even for properties to which it has a fair claim.

GEN. III.  
SPEC. I.  
Paruria  
inops.  
Destitution  
of urine.  
Treatment.  
Stimulants.

Aperients.

Diuretic  
apozems.

## SPECIES II.

### PARURIA RETENTIONIS.

#### Stoppage of Urine.

URINE TOTALLY OBSTRUCTED IN ITS FLOW: WITH A SENSE OF WEIGHT OR UNEASINESS IN SOME PART OF THE URINARY TRACK.

THIS is the ischuria of many writers, and though, like the preceding species, it is equally without a flow of urine, it differs very widely from it in other circumstances. In

GEN. III.  
SPEC. II.  
The ischuria of many authors.

GEN. III.  
SPEC. II.  
Paruria  
retentionis.  
Stoppage  
of urine.  
How dis-  
tinguished  
from the  
preceding  
species.

paruria *inops* the excretories of the kidneys are inactive, and, consequently, no urine is produced. In the species before us the secernents possess an adequate power, but the secretion is obstructed in its passage. And, as it may be obstructed in different organs and in numerous ways in each organ, we have the following varieties :

α Renalis.

Renal stoppage of urine.

Pain and sense of weight in the region of the kidneys, without any swelling in the hypogastrium.

ε Ureterica.

Ureteric stoppage of urine.

With pain or sense of weight in the region of the ureters.

γ Vesicalis.

Vesical stoppage of urine.

With protuberance in the hypogastrium ; frequent desire to make water ; and pain at the neck of the bladder.

δ Urethralis.

Urethral stoppage of urine.

With protuberance in the hypogastrium ; frequent desire to make water ; and a sense of obstruction in the urethra, resisting the introduction of a catheter.

α P. retentionis renalis.  
Renal stoppage of urine.  
Causes.

OBSTRUCTION OF URINE may take place IN THE KIDNEYS from a variety of causes, as spasm, calculous concretions, inflammation or abscess ; and the tumour or swelling which occurs in any of these states, may be so considerable as to prevent the fluid from flowing into the pelvis of the kidneys as it becomes secreted by the tubules, or out of the pelvis when it has collected there.

Progress of the disease.

The kidneys, however, lie so deep, and from their minuteness are so completely buried in the loins that the intumescence which produces the obstruction is often imperceptible to the eye, or even to the touch. At times, however, the organ becomes wonderfully augmented as the process of inflammation proceeds. Cabrolus gives us the history of a purulent kidney that weighed fourteen

Sometimes suppurates.

pounds \*. And where the enlargement is accompanied with but little inflammation, proceeds gradually, and does not enter into a suppurative state, the organ not unfrequently becomes much more enormous, and has sometimes been found to weigh from thirty-five to forty pounds †.

In this condition there is no difficulty in conceiving a total obstruction to the flow of the urine even when elaborated in sufficient abundance. But the kidney, on the contrary, sometimes wastes away, instead of enlarges, and this so much as to become a shrivelled sack, and not exceed a drachm in weight; and as the sinus of the kidney contracts with its body, the organ at its extreme point is sometimes found imperforate: and hence how small soever may be the quantity of fluid which in this morbid condition may be separated from the blood, none whatever can pass into the ureter; and if both the kidneys concur in the same emaciation, this also must form as effectual a cause of the disease before us as any other.

When the STOPPAGE OF URINE exists in the URETERS, the causes may be as numerous and nearly of the same kind as when the kidneys are at fault: for here also we occasionally meet with calculous concretions, inflammation, and spasm: to which we may add grumous blood, viscid mucus, and a closed orifice in consequence of ulceration.

VESICAL RETENTION OF URINE is produced by inflammation, pressure upon the neck of the bladder, irritation, or paresis. Pressure on the neck of the bladder may be occasioned by distention of the rectum from scybala, or other enterolithic concretions, flatus, inflammation, or piles; or by distention of the vagina from inflammation, or a lodgement of the menstrual flux in consequence of an imperforate hymen. Irritation may be excited by a calculus, or too long a voluntary retention of urine, as

GEN. III.  
SPEC. II.  
= P. retentionis renalis.  
Renal stoppage of urine.  
Sometimes becomes paralytic.  
Sometimes wastes away.

6 P. retentionis ureterica.  
Ureteric stoppage of urine.  
Causes the same as in the preceding variety.

7 P. retentionis vesicalis.  
Vesical stoppage of urine.  
Causes.

\* Cabrol. Observ. p. 28.

† Commenc. Liter. Nor. 1731. p. 32. 1737. p. 326.



GEN. III.  
SPEC. II.  
γ P. retentionis vesicalis.  
Vesical stoppage of urine.  
Voluntary retention of urine.  
Bladder when full, sometimes relieved by absorption.

often happens on our being so closely impacted in large assemblies or public courts, or so powerfully arrested by the interest or eloquence of a subject discussed in such places, that we cannot consent to retire so soon as we ought: whence the sphincter of the bladder from being voluntarily, becomes at length spasmodically, constricted, and the urine cannot escape. It sometimes happens under the last circumstance that, from the pressure of the urine against the sides of the bladder, the absorbents are stimulated to an increased degree of action, and a considerable portion of the surplus is thus carried back into the vessels, and perhaps thrown off by perspiration, so that we are able to remain for a very long term of time after the bladder has become painful from over-distention.

Atony of the bladder as a cause.

Atony or paralysis of the bladder by which its propulsive power is destroyed, is a frequent cause; whence, as Saviard has observed, it is often met with in paraplegia\*: and, as Morand remarks, on injuries to the spine†. And hence, I have occasionally found it an attendant upon severe and long protracted attacks of lumbar rheumatism‡: as most practitioners have probably done on injuries to the kidneys, ureters, urethra, prostate gland, or penis. It is said, moreover, to be a result of repelled eruptions: though I have witnessed it in infancy from the irritation of teething. ||

Repelled eruptions:

irritation of teething.

§ P. retentionis urethralis.  
Urethral stoppage of urine.  
Causes.

IN URETHRAL RETENTION OF URINE, the causes do not essentially vary from those already noticed; such as inflammation, the lodgement of a calculus; viscid mucus; and grumous blood. To which are to be added the liga-

\* Observ. Chirurgiques.

† Vermichte Schriften, B. II.

‡ See also Snowden, in the London Medical Journal.

§ Morgagni, de Sed. et Caus. Morb. Ep. xxi. Art. 4.

|| Nov. Act. Nat. Cur. Vol. v. Art. 68.

ture of a strangulating phimosis; irritation from a blennorrhœa or clap; strictures; an ulceration of the urethra producing an opening into the scrotum, or rendering the canal altogether imperforate.

There is always danger from a retention of urine when it has continued so long as to distend and prove painful to the bladder: and the danger is of two kinds, first, that of an inflammation of the distressed organ, and next, that of resorption; and a reflux of the urea, and other constituent parts of the urine, as noticed under the preceding species.

The retention, however, has occasionally continued for a considerable period without mischief. It has lasted from a week to a fortnight\*. Marcellus Donatus gives a case of six months standing†; and Paullini another of habitual retention‡. But in all these an observant practitioner will perceive the two following accompaniments: firstly, a constitutional or superinduced hebetude of the muscular coat of the bladder so as to indispose it to inflammation; and secondly, a resorption of the urinary fluid, and its evacuation by some vicarious channel, as already remarked under *paruria inops*. We have there stated that the two most commonly substituted outlets are the excretories of the bowels and of the skin. Dr. Percival gives an instance of the latter in which the perspirable matter was so much supersaturated with the ammoniacal salt of the reflux urine, as to crystallize on the surface of the body, and this to such an extent that the skin was covered all over with a white saline powder§. Sometimes it has been thrown out from the stomach intermixed with blood, in the form of a hæmatemesis||; and sometimes from the nostrils with the same

GEN. III.  
SPEC. II.  
d P. retentionis urethralis.  
Urethral stoppage of urine.  
Danger from retained urine at all times two-fold.

Retention has sometimes lasted long without evil: accounted for.

Instance of vicarious discharge by skin:

by the stomach:  
nostrils:

\* Eph. Nat. Cur. passim.  
Cornar. Obs. N. 21.

† Lib. iv. cap. 27, 28.

‡ Cent. II. Obs. 26.

§ Edin. Med. Comm. Vol. v. 437.

|| Act. Nat. Cur. III. Obs. 6.

GEN. III.  
SPEC. II.  
B. retentionis urethralis.  
Urethral stoppage of urine.

Quantity retained sometimes very considerable.

Medical process.

Treatment of renal stoppage of urine.

intermixture in the form of an epistaxis\*. And where the absorbents of the bladder have been too torpid for action, it has regurgitated through the ureters into the pelvis of the kidneys, and been resumed by the absorbents of these organs instead of by those of the former†.

The quantity retained, and afterwards discharged, or found in the bladder on dissection, has often been very considerable. It has occasionally amounted to eight or nine pints: and there is a case given by M. Vildé in the *Journal de Medicine*, in which it equalled sixteen pints.

In all the varieties thus pointed out the mode of management must be regulated by the cause as far as we are able to ascertain it.

If we have reason to believe the suppression is strictly renal from the symptoms just adverted to, and particularly from ascertaining that there is no water in the bladder or ureters, in most cases, whether it proceeds from inflammation or stone, we shall do right to employ relaxants, and mild aperients: and, where the pain is violent, venesection succeeded by anodynes. But it sometimes happens that the obstruction is produced by a parabysmic enlargement or coacervation of the substance of the kidney without inflammation. If this should occur in both kidneys at the same time, which is rarely the case, we have little chance of success by any plan that can be laid down. If it be confined to one, the sound kidney will often become a substitute for the diseased, and perform double duty; and we may here attempt a resolution of the enlargement by minute doses of mercury continued for some weeks, unless salivation should ensue, and render it necessary to intermit our practice. A mercurial plaster with ammoniacum should also be worn constantly over the region of the affected organ.

The same plan must be pursued if we have reason to

\* Eph. Nat. Cur. Dec. II. An. IV. Obs. 63.

† Petit, *Traité &c. Œuvres Posthumes*, Tom. III. p. 2.

suspect the obstruction is confined to the ureters. The passage of a calculus is the chief cause of this variety of retained urine: and, independently of the sense of pain and weight in the region of the ureters which an impacted calculus produces, we have commonly also a feeling of numbness in either leg, and a retraction of one of the testicles in men, as the calculus in its passage presses upon the nerves which descend from the spermatic vessels. Opium and relaxants are here the chief, if not the only, means we can rationally employ; though the ononis *spicata*, or rest-harrow of our fields, is said, both in the form of powder, and of decoction, to be useful in this and various other diseases of the bladder accompanied with severe pain: on which account it holds a place in the *Materia Medica* of Bergius. The asplenium *Ceterach* and athamanta *Oreoselinum*, or mountain-parsley were formerly in vogue for the same purpose, but seem to be of feeble efficacy. The seeds of the athamanta *cretensis* or wild-carrot, had a wider and better founded fame, both as a diuretic and lithontriptic. Dr. Cullen employed them for the latter purpose but without success. The suppression is seldom total; for the opposite ureter is rarely so much affected by sympathy as to be spasmodically contracted, and equally to oppose the flow of the urine.

GEN. III.  
SPEC. II.  
Paralysis  
retentionis.  
Stoppage of  
urine.  
Treatment  
of ureteric  
stoppage of  
urine.

The most common variety of this disease is that of VESICAL retention, or a retention of the water in the bladder. This is usually produced by inflammation or spasm by which the sphincter of the bladder becomes contracted, and rigidly closed. Inflammation is to be relieved by the ordinary means; and, in addition to these, by anodyne clysters, and fomentations, a warm-bath, warm liniments, and blisters to the perinæum. Spasm is excited by various causes: a stone in the bladder will do it, an ulcer about the neck of the bladder will do it, as will also too long a voluntary retention of urine. Spasm is for the most part to be treated, and will in most cases be subdued, by the method just proposed for inflammation; to which we may add camphor and opium

Treatment  
of vesical  
stoppage of  
urine.

Camphor.



GEN. III.  
SPEC. II.  
Paruria  
retentionis.  
Stoppage of  
urine.

Mucilagi-  
nous dilu-  
ents.

Terebinthi-  
nate oils.

Taraxa-  
cum.

Bougie to  
be employ-  
ed with  
caution.

by the mouth, and bladders of warm water applied to the pubes and perinæum, or, which is better, the warm-bath itself. Camphor has the double advantage of being a sedative as well as an active diuretic; but combined with opium we obtain a much more powerful medicine than either affords when employed singly. If the retention proceed from Spanish flies camphor alone will often answer: though in this case it is far better to combine with it mucilaginous diluents, as gum-arabic dissolved in barley water. Several of the terebinthinate oils have also been employed with great advantage, as the oil of juniper; the balsamum carpathicum, as it was called by C. Ab Hortis who first introduced it into practice, and recommended it for a multitude of other complaints as well; concerning which there was at one time a great secret, but which is, in fact, nothing more than an essential oil very carefully distilled from the fresh cones of the trees which yield the common turpentine; and the balsamum hungaricum which is an exudation from the tops of the *pinus silvestris*, and proves sudorific as well as diuretic. Another remedy, of early origin, and which has preserved its reputation to our own day, is the dandelion, the leontodon *Taraxacum*, of Linneus. It was at one time regarded as a panacea, and prescribed for almost every disease by which the system is invaded, as gout, jaundice, hypochondrias, dropsy, consumption, parabysmas of every species, as well as gravel and other diseases of the bladder: and was equally employed in its roots, stalks, and leaves. It is now chiefly used as a deobstruent; but it possesses unquestionably diuretic powers, and hence, indeed, its vulgar name of piss-a-bed.

If the joint use of these means should fail, the water must be evacuated by the introduction of a bougie or catheter, though the irritation is sometimes increased by the use of these instruments; and the spasm or the thickening at the prostate or about the neck of the bladder is so considerable, as to prevent an introduction of even the smallest of them. In this case, if the inflammation increase, and the distress be alarming, nothing

remains but to puncture the bladder, either above the pubes, in the perinæum, laterally, or posteriorly through the rectum, for the operation has been performed in all these ways and each has had its advocates.

The URETHRAL retention, as already pointed out, arises also from inflammation, which is to be treated in the ordinary way; or from a calculus or a stricture; both which are best removed by the application of a bougie. In the last case the bougie, if it pass without much pain, should be continued daily, and progressively enlarged in its size. It has often been employed with a tip of lunar or alkaline caustic: and in many instances with perfect success: but very great caution is requisite in the use of a caustic bougie; and even in the hands of the most skilful it has sometimes proved highly mischievous. When a simple bougie is employed, Ferrand\* advises that, if the water do not flow immediately, it should be re-introduced and left in the urethra; and I have myself advised such a retention of the bougie catheter through an entire night with considerable advantage; for the water which would not flow at first has gradually trickled, and given some relief to the over distended bladder, which has hereby progressively recovered its tone and propulsive power; so that the water before morning has been propelled in a stream. But this is a plan only to be pursued where the organ has too little instead of too much irritability, and consequently where there is no danger of inflammation.

Gen. III.  
Spec. II.  
Paruria  
retentionis.  
Stoppage of  
urine.  
Treatment.  
Puncture of  
the bladder  
when ne-  
cessary.  
Treatment  
of urethral  
stoppage of  
urine.  
Bougie  
tipped with  
caustic re-  
quires con-  
siderable  
circum-  
spection.

Simple  
bougie may  
remain in  
the urethra  
for a night,

where the  
bladder has  
little irrita-  
bility.

---

\* Blegny Zed, Ann. 1681.

## SPECIES III.

## PARURIA STILLATITIA.

## Strangury.

## PAINFUL AND STILLATITIOUS EMISSION OF URINE.

GEN. III.  
SPEC. III.  
Dysuria of  
Sauvages  
and others.

THIS is the dysuria of Sauvages and later writers. In the preceding species there is an entire stoppage of the urine; in the present it flows, but with pain and by drops. Several of the causes are those of paruria *retentionis*; but others are peculiar to the species itself; and, as they are accompanied with some diversity in the symptoms, they lay a foundation for the following varieties:

$\alpha$ Spasmodica.	Spasmodic strangury.
$\zeta$ Ardens.	Scalding strangury.
$\gamma$ Callosa.	Callous strangury.
$\delta$ Mucosa.	Mucous strangury.
$\varepsilon$ Helminthica.	Vermiculous strangury.
$\xi$ Polyposa.	Polypose strangury.

$\alpha$  P. stilla-  
titia spas-  
modica.  
Spasmodic  
strangury.  
Mostly a  
sympa-  
thetic af-  
fection.

THE FIRST VARIETY is characterised by a spasmodic constriction of the sphincter, or some other part of the urinary canal, catenating with spasmodic action in some adjoining part. The spasmodic actions of which this variety is a concomitant are chiefly those of hysteria, colic, and spasm in the kidneys. It is hence a secondary affection, and the cure must depend on curing the diseases which have occasioned it. Opium and the digitalis will often afford speedy relief when given in combination.

$\zeta$  P. stilla-  
titia ardens.  
Scalding  
dysury.  
Dysuria  
primaria of  
Sauvages.  
Exciting  
causes.

IN THE SECOND VARIETY there is also a spasmodic constriction, but of a different kind, and making it more of a primary affection; whence Sauvages and others have distinguished it by the name of dysuria *primaria*. It is excited by an external or internal use of various stimu-

lants as acrid foods, or cantharides taken internally; and is accompanied with a sense of scalding as the urine is discharged.

This is also a frequent result of blisters: and to avoid it in this case the patient should be always advised to drink freely of warm diluents in a mucilaginous form. Gum-arabic, marsh-mallows root, the jelly of the orchis or salep, infusion of quince-seed, lint-seed, or decoction of oatmeal or barley may be employed with equal advantage; for they do not essentially differ, and the only preference is to be given to that which affords the largest proportion of mucilage.

Formerly the winter-cherry (*physalis Alkekengi*, Linn.) was in much repute, and was supposed to produce speedy relief\*. It is unquestionably sedative and diuretic, and possesses these properties without heating or irritating: and seems to be worthy of farther trial. As a sedative, indeed, Hoffman employed it in hæmoptysis; and as a diuretic it has been still more generally made use of in dropsy. About five or six cherries or an ounce of the juice forms a dose: the pericarp is bitter, yet the fruit within possesses but little of this property, and has an acidulous and not unpleasant taste.

Camphor has also been employed with great advantage for the same purpose, and acts on the same double principle of being a diuretic and a sedative. It is often found to act in the same manner when applied externally, and even when intermixed with the blister plaster itself, as though in some constitutions it possesses a specific influence over the bladder: upon which subject Dr. Perceval has penned the following note in his Commentary to the volume of Nosology; "In three instances blisters sprinkled with camphor were repeatedly applied without strangury, and as uniformly, when the camphor was omitted with the concurrence of that symptom. I will not say that in all constitutions, camphor will obviate

GEN. III.  
SPEC. III.  
C P. stilla-  
titia ardens.  
Scalding  
dysury.  
Treatment.  
Mucilagi-  
nous dilu-  
ents.

Alkekengi  
or winter-  
cherry.

Camphor.

\* Manardus, Epist. Libr. XIII. N. 12.



GEN. III.  
SPEC. III.  
6 P. stilla-  
titia ardens.  
Scalding  
dysury.  
Treatment.  
Neutral  
aperients.

7 P. stilla-  
titia cal-  
losa.  
Callous  
strangury.

Most com-  
monly seat-  
ed in the  
bulb or  
prostate.

Mischiev-  
ous results.

Remedial  
process.  
Skilful use  
of a bougie  
often ser-  
viceable.  
Illustrated.

strangury; nor in all constitutions will cantharides with-  
out camphor produce it."

It will commonly be found useful, and sometimes ab-  
solutely necessary, in this variety, from whatever cause  
produced, to employ neutral aperients: and with them  
the means just recommended in cases of cantharides will  
rarely fail to succeed in most other cases. If not, the prac-  
titioner should have recourse to a decisive dose of opium.

Strangury is also occasioned by a CALLOUS THICKENING  
of the membrane of the urethra producing a permanent  
stricture. Some interesting examples of this may be  
seen in Dr. Baillie's Plates of Morbid Anatomy\*.

We have already had occasion to observe that the  
most common situation of a stricture is in its bulb or the  
prostate gland that lies immediately above†, though it  
may take place in any other part. A stricture of this  
kind "consists," says Dr. Baillie, "of an approximation,  
for a short extent, of the sides of the canal to each other.  
Sometimes there is a mere line of approximation, and  
not uncommonly the sides of the urethra approach to  
each other from some considerable length, as, for instance,  
nearly an inch. The surface of the urethra at the stric-  
ture is often sound, but not unfrequently it is more or  
less thickened." It is this thickening which produces the  
variety of strangury before us. The sides of the urethra  
have sometimes approximated so nearly by its increase  
that the stricture will only allow a bristle to pass through  
it: and hence ulcers are occasionally formed in the pros-  
tate gland, and fistulæ in the perinæum; and the cavity  
of the prostate is enlarged from distention, in conse-  
quence of the accumulation of urine behind the ulcer; of  
all which Dr. Baillie has also given examples.

When the prostate, or urethra, is highly irritable, pal-  
liation only can be resorted to; but where the thickening  
is recent and there is little irritation, a skilful use of a

\* Fascic. viii. Pl. iv. v.

† Vol. iv. Blenorrhœa luodes, p. 80.

bougie will sometimes afford temporary relief; after which, by gradually employing those of larger diameter, the stricture will often give way and the canal widen so as to allow the water to flow with considerable comfort. I have at this moment a patient under my care, who was so grievously afflicted with this variety of strangury about six years ago, from two distinct strictures, as never to make water otherwise than by drops: the smallest cat-gut bougie could with difficulty be made to pass through the thickened parts; and he was entirely debarred from going into company. By gradually accustoming himself to bougies of increasing diameter he can now bear the introduction of a moderately sized one with ease; the water flows freely, though in a small stream, and he is able to go into company and to travel without inconvenience. He still finds it necessary, however, that the bougie should occasionally be continued, and it is introduced into the urethra every week or fortnight.

In the variety which we have called MUCOUS STRANGURY, the urine is intermixed with a secretion of acrimonious mucus, of a whitish or greenish hue, which is frequently a sequel of gout, lues, or blenorrhœa. It is often, however, produced by cold, and in this last case forms the *catarrhus vesicæ* of various authors: so denominated from its being conceived that the bladder and urethra are affected in the same manner as the nostrils in a coryza. The constriction therefore depends upon an excoriated or irritable state of the urethra, or neck of the bladder. And hence the warm-bath, or sitting in a bidet of warm-water, is often of considerable service. Warm and diluent injections have also frequently been found, as well as diluent and demulcent drinks, of great advantage. If this variety continue long it is apt to produce an obstinate and very narrow stricture, of which ulceration and fistulæ in perinæo are frequent results.

Strangury is also sometimes accompanied with a DISCHARGE OF WORMS of a peculiar kind, and proceeds from the irritation they excite. Of this we have various in-

GEN. III.  
SPEC. III.  
γ P. stilla-  
titia cal-  
losa.  
Callous  
strangury.  
Treatment.

δ P. stilla-  
titia mu-  
cosa.  
Mucous  
strangury.

Catarrhus  
vesicæ  
what.

Medical  
treatment.

ε P. stilla-  
titia hel-  
minthica.  
Vermicu-  
lous stran-  
gury.

GEN. III.  
SPEC. III.  
P. stilla-  
titia hel-  
minthica.  
Vermicu-  
lous stran-  
gury.  
Worms  
differ in  
form in  
different  
cases.  
Sometimes  
solitary.

stances in the Ephemerides of Natural Curiosities\*, in some of which the worms were found in the bladder after death, and in others discharged by the urethra during life. They are described as of different forms in different cases, sometimes resembling the larves of insects: sometimes distinctly cucurbitinous, of the fasciola, fluke, or gourd-kind. Dr. Barry of Dublin has given us the case of a solitary worm discharged by the urethra of a man aged fifty, "above an inch in length, of the thickness of the smallest sort of eel, and not unlike it in shape, ending in a sharp-pointed tail." It was dead, but did not seem to have been dead long. The patient had for several years been in the habit of discharging urine mixed with blood, but unaccompanied with pain either in the bladder or urethra. During the whole of this time he had been feverish; and gradually lost his appetite, found his strength decay, and had become turbid and hectic; from all which he speedily recovered as soon as this cause of irritation was removed†.

Sometimes  
gregarious.  
Illustrated  
from Law-  
rence in a  
singular  
case.

We have also an example of a like vermicule, highly gregarious, and of much longer dimensions in an interesting paper of Mr. Lawrence, inserted in the second volume of the Medico-Chirurgical Transactions. The patient was a female aged twenty-four, and had long laboured under a severe irritation of the bladder, which was ascribed to a calculus. She at length discharged three or four worms of a non-descript kind, and continued to discharge more, especially when their removal was aided by injections into the bladder, or the catheter had remained in the urethra for the night. The evacuation of these animals continued for at least a twelvemonth. Twenty-two were once passed at a time; and the whole number could not be less than from eight hundred to a thousand,

\* Dec. I. Ann. ix. x. Obs. 113. Dec. II. Ann. I. Obs. 104. Ann. VI. Obs. 31. Dec. III. Ann. I. Obs. 82. Ann. II. Obs. 203.

† Edin. Med. Ess. Vol. v. Part. II. Art. LXXII. p. 269.

A smaller kind was also occasionally evacuated. The larger were usually four to six inches in length; one of them measured eight. For the most part they were discharged dead.

The subject is obscure, but it may be observed that the ova of worms, and even worms themselves, are occasionally found in many animal fluids, and have been especially detected in the blood-vessels, where they have been hatched into grubs or vermicules, for the most part of an undecided character; though some, observed in the mesenteric arteries of asses, have been referred to the genus *strongylus* \*. Dr. Barry supposes his isolated worm to have travelled in the form of an ovum as far as to the extremity of an exhaling artery opening into the bladder; to have found, in this place, a proper nidus and nourishment for the purpose of being hatched into a larve or grub, and of growing to the size it had assumed when thrown out of the urethra; and, in consequence of this progressive growth and the proportional dilatation of the vessel in which it was lodged, he accounts for the discharge of blood without pain. If a worm reach the bladder alive and full of eggs, we have no difficulty in accounting for a succession of progenies.

Strangury is also sometimes produced in consequence of the bladder or urethra, or both, being obstructed by the formation of a POLYPOUS EXCRESCENCE which has occasionally shot down to the external extremity.

Dr. Baillie's Morbid Anatomy furnishes several examples of this variety; which, in most cases, is only to be radically cured by an extirpation of the substance which produces the obstruction †, wherever it can be laid hold of. When small, however, and in the form of caruncles, these excrescences have sometimes separated spontaneously, and been thrown out by the urethra

GEN. III.  
SPEC. III.  
s. P. Stilla-  
titia hel-  
minthica.  
Vermicu-  
lous stran-  
gury.  
Explained  
analogi-  
cally.

ζ P. Stilla-  
titia poly-  
posa.  
Polypous  
strangury.  
Only to be  
cured radi-  
cally by ex-  
tirpation,  
when it  
can be laid  
hold of.

When  
small, has  
been some-  
times spon-  
taneously  
exfoliated.

\* Hodgson on the Diseases of Arteries.

† Fascie. IX. Plate III.



GEN. III.  
SPEC. III.  
ζ P. Still-  
titia poly-  
posa.  
Polypous  
strangury.  
Singular  
case in il-  
lustration  
from Per-  
ceval.

with very great relief to the sufferer, and have been fol-  
lowed by a perfect cure \*.

Upon this variety my venerable friend Dr. Perceval has added the following note in his manuscript Com-  
mentary on the Nosology, from which the present work has been so often enriched: "It might not be amiss to insist on a case which sometimes deceives young practi-  
tioners: ischuria cum stranguria. A copious draining of urine took place for several days in a patient with a swelled belly. Death supervening, the bladder was found distended to an enormous bulk, and the parietes of the abdomen wasted. Two excrescences near the neck of the bladder internally had almost closed its outlet, and interfered with the action of the sphincter."

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## SPECIES IV.

### PARURIA MELLITA.

#### Saccharine Urine.

URINE DISCHARGED FREELY, FOR THE MOST PART PRO-  
FUSELY; OF A VIOLET SMELL AND SWEET TASTE; WITH  
GREAT THIRST, AND GENERAL DEBILITY.

GEN. III.  
SPEC. IV.  
Diabetes of  
authors.  
Term used  
in a loose  
sense for-  
merly,

THIS is the diabetes, diabetes Anglicus, or diabetes mel-  
litus of authors; from διαθήκη, importing "a siphon," or  
rather from διαβαίνω, "transeo." Diabetes among the Greek  
and Roman, and, indeed, among modern physicians  
till the time of Willis, imported simply a flux of urine,

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\* Fabric. Hildan. Cent. iv. Obs. LIII.  
Art. Nat. Cur. Vol. i. Obs. xiii.

either crude or aqueous, for no distinction was made between the two, and both were named indifferently diabetes, dipsacus from the accompanying thirst, urinary diarrhoea, urinal dropsy, and hyderus (*ὑδερὸς*), or water-flux\*. The writers among the ancients who seem chiefly to have noticed it are Galen, Aretæus, and Trallian; and the reader who is desirous of knowing what they say, and is not in possession of the original authors, may turn to Dr. Latham's Treatise upon the disease† who has translated the whole with very great clearness and fidelity. The form of diabetes, to which we are now directing our attention, Galen describes as having a resemblance to lientery, from the rapidity with which the solids and fluids of the body seem to be converted into a crude and liquid mass, and hurried forward to the kidneys; and to canine appetite, from the voracity and thirst which are its peculiar symptoms. He supposes a high degree of appetency or irritation to exist in the substance of the kidneys, in consequence of which it attracts the matter of urine with great vehemence from the vena cava; and an equal degree of atony and relaxation to exist in its orifices or pores, so that the same matter flows off unchanged as soon as it reaches them‡.

This general view of the subject was adopted with a few additions by Aretæus, and without any by Trallian; and seems to have descended with little variation, as we have just observed, till the time of Willis, who first called the attention of practitioners to the curious and important fact that the urine of diabetic patients, seemed in many cases, to contain a saccharine principle. These cases, however, were not, at that time, duly distinguished, and hence, in Sauvages, who was well acquainted with Willis's discovery, diabetes signifies equally an immoderate

GEN. III.

SPEC. IV.

Paruria

mellita.

Saccharine

urine.

importing a flux of crude or aqueous urine of any kind.

Synonyms.

Dipsacus.

Hyderus, or water-flux.

Treated of by Galen, Aretæus and Trallian.

Description of Galen, as applicable to the present disease.

Galen's view adopted by his successors:

till the time of Willis, who first pointed out the existence of a saccharine principle. Yet no proper distinction was made by Sauvages and others.

\* Galen. de Crisibus, Lib. i. Cap. xii.

† Facts and Opinions concerning Diabetes, 8vo. 1811.

‡ De Loc. Affect. Lib. vi. Cap. iii. iv., compared with De Crisibus, Lib. i. Cap. xii.

GEN. III.  
SPEC. IV.  
Paruria  
mellita.  
Saccharine  
urine.

How distinguished  
by Young:  
the diabetes  
insipidus of  
Cullen  
equivalent  
to his hyper-  
uresis  
aquosus.  
Whether  
the last ex-  
ists as an  
idiopathic  
affection.

Pathology  
involved in  
obscurity.

Seat of the  
disorder a  
subject of  
discussion.

flux of urine from hysteria, gout, fever, spirituous potation, as well as urine combined with saccharine matter: though the only relation which the last has to the rest is that of its being *usually* secreted in a preternatural quantity: but as even this last quality, though mostly, is not always, the case, it should be distinguished by some other name than that of diabetes, and form a distinct division: or, if the name of diabetes be applied to it, it should be given to it exclusively. Dr. Young, who retains the name in the latter sense, and employs it as that of a genus, justly allows but one species to the genus, the diabetes *mellitus* of Cullen, and describes the diabetes *insipidus* under the genus and species of hyperuresis *aquosus*. There is great doubt whether this last ever exists as an idiopathic affection. Cullen himself, indeed, candidly expresses the uncertainty of his mind upon the subject: "Almost all the cases of diabetes of late times," he observes, "exhibit saccharine urine, ita ut dubium sit, an alia diabetes idiopathicae et permanentis species revera detur." If such be found it will probably be nothing more than a variety of the next species in the present arrangement, PARURIA INCONTINENS\*: while the honeyed diabetes or saccharine urine ought to be studied as a distinct affection.

The pathology of this disease is still involved in a considerable degree of obscurity: for though anatomy has pointed out a few morbid changes that exist more or less extensively in the urinary or digestive organs, and chemistry has sufficiently explained to us the morbid character of the discharge, they have thrown less light upon its origin than could be wished for, and have hitherto led to no satisfactory opinion upon the subject. Even the seat of the disorder is, to the present hour, a point of controversy; and as its seat, together with the nature of its cause, can only be collected from its symptoms, we will first lay down its general history and afterwards

\* Spec. V. p. 492.

glance at a few of the leading hypotheses which have been started in respect to its pathology.

Saccharine or honeyed paruria is rarely, though sometimes \*, found in early life, but is often a sequel to a life of intemperance, on which account it is occasionally connected with a morbid state of the liver. It makes its approach insidiously, and often arises to a considerable degree and exists for some weeks without being particularly attended to. If the urinary symptoms take the lead it is without the patient's noticing them, for the first morbid change he is sensible of is in the stomach. At this time, to adopt the description of Dr. Latham, "It is attended, for the most part with a very voracious appetite, and with an insatiable thirst; with a dry harsh skin, and clammy, not parched, but sometimes reddish tongue; and with a frequent excretion of very white saliva, not inspissated, but yet scarcely fluid. As the disease proceeds it is accompanied often with a hay-like scent or odour issuing from the body, with a similar sort of halitus exhaling from the lungs, and with a state of mind dubious and forgetful: the patient being dissatisfied, fretful, and distrusting, ever anxious indeed for relief, but wavering and unsteady in the means advised for the purpose of procuring it †."

In the mean time the kidneys discharge a fluid usually very limpid and large in quantity, though sometimes slightly tinged with green, like a diluted mixture of honey and water, and possessing a saccharine taste more or less powerful. The pulse varies in different individuals, but, for the most part, is quicker than in health; and not unfrequently there is a sense of weight or even acute pain in the loins occasionally spreading to the hypochondria, a symptom which Aretæus notices as one of the earliest that appears; the uneasiness extending still lower till, as the same writer remarks, a sympathetic smarting

GEN. III.  
SPEC. IV.  
Paruria  
mellita.  
Saccharine  
urine.  
Descrip-  
tion of its  
origin.

Progress.

\* Latham's Facts and Opinions, p. 176.

† Facts and Opinions concerning Diabetes, &c. p. 1.



GEN. III.  
SPEC. IV.  
Paruria  
mellita.  
Saccharine  
urine.  
Termination.

is felt at the extremity of the penis whenever the patient makes water.

The flesh wastes rapidly; and, as the emaciation advances, "cramps," says Dr. Latham, "or spasms of the extremities sometimes supervene, the pulse is more quick and feeble, and the saliva more glutinous." And when the strength is almost exhausted in a still more advanced stage of the disease, the lower extremities often become edematous, and the skin cold and damp: the diabetic discharge is then frequently much diminished, and is sometimes even found to become more urinous for a few hours before death closes the distressing scene."

Occasional  
concomi-  
tants.  
Pulmonic  
affection,

A pulmonic affection occasionally accompanies or precedes the attack; Dr. Bardsley, indeed, affirms that he does not recollect a case that was entirely free from this symptom.

Costiveness  
sometimes  
very obsti-  
nate.

And it is probably on this account, as also from the feverish state of the pulse, which by some writers has been supposed to partake of a hectic character, that by M. M. Nicolas and Gueudeville the disease has been denominated *Phthisurie sucrée* \*. The state of the bowels is extremely variable, though there is commonly a troublesome costiveness; sometimes, indeed, so much so, that the feces are peculiarly hardened and scybalous: which is well described by a patient of Dr. Latham's, in a letter of consultation; "The heat of my body," says he, "I suppose arises from a most determined costiveness that I cannot find means to conquer, and which occasions me great pain and misery, frequently feeling an inclination without the ability of discharging: and when, after much difficulty, the excrement is ejected, it has almost the solidity of lead †."

Sometimes  
connected  
with a fa-  
mily pre-  
disposition.

In a few instances the disease seems to be connected with family predisposition. Mr. Storer has noticed a case of this kind in his communication with Dr. Rollo; and M. Isenflamm

\* *Récherches et Expériences Médicales et Chimiques sur la Diabète sucrée, ou la Phthisie sucrée.* 8vo. Paris, 1803.

† Facts and Opinions, &c. p. 185.

has given the history of seven children of the same parents who fell victims to it in succession \*.

The real nature of the fluid evacuated has been very sufficiently determined both in our own country and on the Continent by chemists of the first authority, who have concurrently ascertained that, whilst it is destitute of its proper animal salts, it is loaded with the new ingredient of saccharine matter.

Dr. Dobson from a pound of urine collected an ounce of saccharine substance; and Mr. Cruikshank, from thirty six ounces Troy, obtained, in like manner, by evaporation, not less than three ounces and a quarter: which, from the quantity discharged by the patient, would have amounted to not less than twenty-nine ounces every twenty-four hours. Chevreul has shown that by concentrating this morbid urine and setting it aside we may obtain a deposit of sugar in a crystallized state.

The absence of animal salts has been ascertained not less satisfactorily. M. M. Nicolas and Gueudeville showed, by a series of experiments in 1802, that the saccharine urine contains no urea, nor uric or benzoic acid; that the phosphoric salts exist in a very small proportion: and that in consequence of its sugar it will enter into the vinous and acetous fermentation, and yield an alcohol of a disagreeable odour †. The same results have since been obtained by M. M. Dupuytren and Thenard by experiments still more satisfactory. They also found an albuminous substance in the urine which is always discharged in a sensible form when the disease begins to take a favourable change, and is the constant harbinger of a return of the proper animal salts; for after having appeared for a little while it gradually diminishes and yields its place to the urea and uric acid. In an excellent paper of Dr. Henry's inserted in the Transactions of the

GEN. III.  
SPEC. IV.  
Paruria  
mellita.  
Saccharine  
urine.  
Nature of  
the fluid  
evacuated:  
destitute of  
its proper  
salts; and  
loaded with  
saccharine  
matter.

The last  
proved by  
experi-  
ments of  
Dobson and  
Cruikshank.

Absence of  
animal  
salts proved  
by Nicholas  
and Gueu-  
deville.

Later ex-  
periments of  
Dupuytren  
and Then-  
ard:

of Henry.

\* Versuet einiger practischer Anmerkungen über die Eingeweide, &c. Erlang. 1784.

† Recherches et Expériences, ut supra citat.

GEN. III.  
SPEC. IV.  
Paruria  
mellita.  
Saccharine  
urine.  
Results of  
dissection.  
Morbid  
state of  
kidneys as  
detected by  
Cruikshank.

The same  
as detected  
by Baillie.

Principal  
hypotheses  
more or less  
appealing  
to the pre-  
ceding  
facts.

Medico-Chirurgical Society \*, he appears to have arrived at many of the same conclusions though by a somewhat different process.

Dissection has also been had recourse to for collateral information on this complicated malady: but its researches have been less successful than those of the chemists. The only organ in which any morbid structure has been clearly ascertained is the kidneys. Mr. Cruikshank affirms generally that the arteries of the kidneys are, on these occasions, preternaturally enlarged, particularly those of the cryptæ or minute glands which secrete the urine †." And this state of inflammation or morbid activity is confirmed by Dr. Baillie in his 'Account of a case of diabetes with an examination of the appearances after death ‡,' in which he tells us that "The veins upon the surface were much fuller of blood than usual, putting on an arborescent appearance. When the substance of both kidneys was cut into it was observed to be every where much more crowded with blood-vessels than in a natural state, so as, in some parts, to approach to the appearance of inflammation. Both kidneys had the same degree of firmness to the touch as when healthy: but I think, were hardly so firm as kidneys usually are, the vessels of which are so much filled with blood. It is difficult to speak very accurately about nice differences in degrees of sensation unless they can be brought into immediate comparison. A very small quantity of a whitish fluid, a good deal resembling pus, was squeezed out from one or two infundibula in both kidneys, but there was no appearance of ulceration in either."

These premises, taken conjointly or separately, according to the light in which they may be viewed by different persons, open an abundant field for speculation con-

\* Transact. of Medico-Chirurg. Soc. Vol. x.

† On the Lacteals and Lymphatics. p. 69.

‡ Transactions of a Society for the Improvement of Medical and Chirurgical Knowledge, &c.

cerning the nature of the malady: and hence, an infinity of hypotheses have been offered of which the following are the chief:

I. The disease is dependent upon a morbid action of the stomach, or some of the chylifacient viscera, which necessarily, therefore, constitute its seat.

II. The disease is dependent upon a dyscrasy or intemperament of the blood, produced by a morbid action of the assimilating powers.

III. The disease is dependent upon a retrograde motion of the lacteals, and is consequently seated in the lacteal vessels.

IV. The disease is dependent upon a morbid condition of the kidneys, and seated in these organs.

I. The first of these hypotheses, though not the most ancient, has been by far the most commonly received, and is, perhaps, the most prevalent in the present day. It is derived from observing the increased action which exists in the stomach, and probably also in the collatitious viscera, in conjunction with the untempered fluid which is discharged by the kidneys, whose morbid crasis is referred to these organs. But even here there has been much difficulty in determining which of the digestive viscera is principally at fault. Dr. Mead having remarked that the disease is frequently to be traced amongst those who have lived intemperately, and particularly who have indulged in an excess of spirits and other fermented liquors, ascribed it to the liver, and the idea was very generally received in his day. Dr. Rollo has since, and certainly with more plausibility, fixed the seat of the disease in the stomach, and confined it to this organ: conceiving it to consist "in an increased action and secretion with a vitiation of the gastric fluid, and probably too active a state of the lacteal absorbents:—while the kidneys, and other parts of the system, as the head and skin, are only affected secondarily."

GEN. III.  
SPEC. IV.  
Paruria  
mellita.  
Saccharine  
urine.

I. Hypothesis of a morbid action of the stomach or chylifacient viscera.  
Scope of the argument.

Supported by Mead:

and Rollo:

Objections.



GEN. III.  
SPEC. IV.  
Paruria  
mellita.  
Saccharine  
urine.

I. Hypo-  
thesis of a  
morbid ac-  
tion of the  
stomach or  
chylofaci-  
ent viscera.

II. Hypo-  
thesis of a  
dyscrasy of  
the blood.

Started by  
Willis:

perfectly from the first, and the morbid change of animal salts for sugar is the work of the stomach or its auxiliary organs, which are immediately influenced by it. It is a strong if not a fatal objection to this view of the subject, that the blood before it reaches the kidneys, is found, upon the most accurate experiments to which it has hitherto been submitted, "to contain the salts of the blood, but no trace whatever of sugar." The experiments I allude to are those of Dr. Wollaston, and Dr. Marcet, detailed in the *Philosophical Transactions* \*. Prior experiments had, indeed, been made under the superintendence of Dr. Rollo, which induced those engaged in them to conjecture that some small portion of sugar might exist in the blood; but these trials led to no definite conclusion, and did not satisfy the experimenters themselves. The results of Wollaston have since been confirmed by other experiments of Nicholas, Sorg, Thenard, and Bostock.

II. The second hypothesis, or that which regards the disease as dependent upon a dyscrasy or intemperament of the blood, produced by a morbid action of the assimilating powers, is of parallel date with the preceding, and has had the successive support of many of the ablest and most distinguished pathologists from its origin to our own day. It was first started by Dr. Willis and immediately followed upon his discovery of the saccharine property of diabetic urine, who thus expresses his opinion of the seat and nature of the disease in his treatise upon this malady:—"Diabetes is rather an immediate affection of the blood than of the kidneys, and thence derives its origin; for the mass of the blood becomes, so to speak, melted down, and is too copiously dissolved into a state of serosity: which is sufficiently manifest from the prodigious increase of the quantity of urine which cannot arise from any other cause than from this solution and waste of blood." He admits, however, that the orifices

\* Vol. ci. 1811. p. 96.

of the kidneys are at this time peculiarly relaxed and patulous, in consequence of which the untempered fluid passes off with a greater ease and rapidity.

This hypothesis of Willis was readily embraced by his distinguished contemporary Sydenham, who fortified himself in the same by observing, that those who have long laboured under an intermittent, and have been unskilfully treated, and especially old persons, sometimes fall into a diabetes, from a crude or debilitated condition of the blood. And hence, he tells us in his letter to Dr. Brady, Regius Professor of Physic in the University of Cambridge, that “the curative indication must be completely directed towards invigorating and strengthening the blood, as well as restraining the preternatural flux of urine.”

Thus advanced and advocated by two of the brightest luminaries that have ever enlightened the medical world, it cannot be a matter of surprize that this opinion should have been extensively adopted. In truth it was espoused on the continent as well as at home, and, in 1784, gave birth to M. Place’s able dissertation at Göttingen\*: and continued to be the prevailing opinion till the appearance of Dr. Rollo’s work, to which we have just adverted; and even since the appearance of this work, it has been still warmly and ably maintained by Dr. Latham, who, while he pays all the homage to Dr. Rollo’s labours and abilities to which they are entitled, and scrupulously adopts the general principles of his practice, opposes his doctrine of a morbid condition of the stomach†, which, as well as the kidneys‡, he believes to be perfectly sound in its action. “I must take leave,” says Dr. Latham, “to differ in opinion most materially from Dr. Rollo, who seems to consider this most enormous appetite as such an evil in diabetes, as to endeavour, by every possible

GEN. III.  
SPEC. IV.  
Paruria  
mellita.  
Saccharine  
urine.  
II. Hypo-  
thesis of a  
dyscrasy of  
the blood.  
Supported  
by Syden-  
ham:

and very  
generally  
adopted,

abroad as  
well as at  
home.

Advocated  
by Latham:

who differs  
from Rollo  
in an es-  
sential  
point of  
pathology,  
though he  
accedes to  
his practice  
generally.

\* Diss. de verâ Diabetis causâ in defectû assimilationis quærenda. Goett. 1784.

† Facts and Observations, &c. p. 230.

‡ Id, p. 110.

GEN. III.  
SPEC. IV.  
Paruria  
mellita.  
Saccharine  
urine.

II. Hypo-  
thesis of a  
dyscrasy of  
the blood.

The objec-  
tions to the  
preceding  
hypothesis,  
equally ap-  
plicable to  
the present.

III. Hypo-  
thesis of a  
retrograde  
motion of the lym-  
phatics.

means, to repress it, having founded his theory principally upon the idea that on this action of the stomach depends the evolution of sugar with the whole train of consequent symptoms: whereas, I consider the appetite, however great it may be, and which I would never check by medicines, as a natural sensation, calling into its full exercise that organ through which the constant waste of the body must be directly supplied, and without which the patient must soon inevitably perish: and I look upon the more moderate appetite which takes place usually in a few days after a strict conformity to animal diet, as the surest sign of convalescence, inasmuch as I hold it in proof that the blood being thereby rendered firmer in its crisis, there is less disposition in it to be decomposed, and, consequently, (as is the fact) that there must soon be a diminished discharge of nutritious matter from the kidneys.

An opinion promulgated and maintained in succession by authorities so high, and names so deservedly dear to the HEALING ART, ought not to be lightly called in question: but it is as difficult to reconcile the present notion as the preceding with the existence of the ordinary salts and the non-existence of sugar in the blood of diabetic patients. Dr. Latham, however, has argued the point with great and elaborate ingenuity, and has endeavoured to show, by a train of reasoning which is worthy of attention, that the sugar, in respect to its elements, may exist in the blood, though the substance itself be not discoverable in it, being "so weakly and loosely oxygenated as to be again readily evolved by the secretory action of the kidneys, not from any fault in the kidneys themselves, but from the regular and natural exercise of their function, in separating from the imperfect blood such matters as are not properly combined with it \*."

III. A bold and plausible effort was made, between forty and fifty years ago, to get rid of the stumbling-block of the absence of sugar from the blood by showing that

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\* Ut supra, p. 97.

provided it were once formed by the digestive organs, there is no necessity for its travelling in this direction. This hypothesis was brought forward by that very acute and ingenious physiologist, Mr. Charles Darwin, in an essay presented to the Æsculapian Society of Edinburgh in 1778, that obtained for him an unanimous grant of the prize-medal for the year: an honour dearly earned, as almost immediately afterwards, he fell a martyr to his indefatigable pursuits, while on the verge of graduating. In this essay he endeavoured to account for the disease of saccharine urine by a retrograde motion of the lymphatics of the kidneys. Having endeavoured to establish the general principle of a retrograde lymphatic action, he proceeds to remark, that all the branches of the lymphatic system have a certain sympathy with each other, insomuch that when one branch is stimulated into any unusual motion, some other branch has its motions either increased, or decreased, or inverted, at the same time: thus, when a man drinks a moderate quantity of vinous spirit, the whole system acts with more energy by concert with the stomach and intestines, as is seen from the glow on the skin, and the increase of strength and activity: but when, says he, a greater quantity of this inebriating material is drunk, at the same time that the lacteals are quickened in their power of absorbing it, the urinary branches of the absorbents which are connected with the lacteals by many anastomoses, have their motions inverted, and a large quantity of pale, unanimalized urine is hereby discharged. Where, continues Mr. Darwin, this ingurgitation of too much vinous spirit occurs often, the urinary branches of absorbents at length gain a habit of inverting their motions whenever the lacteals are much stimulated: and the whole or a great part of the chyle, is thus carried to the bladder without entering the circulation, and the body becomes emaciated: while the urine is necessarily sweet and of the colour of whey. And on this account Mr. Darwin proposed to denominate the species before us a *chyliferous diabetes*.

GEN. III.  
SPEC. IV.  
Paruria  
mellita.  
Saccharine  
urine.  
III. Hypo-  
thesis of a  
retrograde  
motion of  
the lym-  
phatics.  
Started by  
C. Darwin.

Scope of  
argument,



GEN. III.  
SPEC. IV.  
Paruria  
mellita.  
Saccharine  
urine.

III. Hypo-  
thesis of a  
retrograde  
motion of  
the lym-  
phatics.  
Supported  
by the  
author of  
Zoonomia.  
Incidental  
facts that  
give it a  
colourable  
support.  
These facts  
explained  
in the  
Proem to  
the present  
Class.

Objections  
urged by  
Cruikshank.

This hypothesis, for, ingenious as it is, it has never been entitled to a higher character, became at one time also very popular, and was supported by the talents of the celebrated author of *Zoonomia*, the father of its ingenious inventor. A few singular facts which have occurred since the decease of both these writers, seem at first sight to give it a little colourable support: such as the rapid passage of certain substances from the stomach to the bladder apparently, according to the experiments of Dr. Wollaston and Dr. Marcet, without their taking the course of the circulation; and M. Magendie's experiments upon the lymphatic system, and the doctrine he has founded upon them. These, however, the author has examined with some attention in the *Physiological Proem* to the present Class, and has endeavoured to reconcile them with the ascertained and admitted structure and laws of the animal frame: so that they can add but little to the speculation before us. And in truth, how much soever it may have been caught up hastily by men of warm imagination, or those who are fond of novelty, the soberer physiologists have never been made converts to it. "In the diabetes," says Mr. Cruikshank, "it has been supposed that the chyle flows retrograde from the thoracic duct into the lymphatics of the kidney, from them into the cryptæ, so into the tubuli uriniferi, thence into the infundibula, pelvis, ureter, and so into the bladder. This opinion is mere supposition, depending on no experiments. And, besides that all such opinions should be rejected, why should the chyle flow retrograde into the lymphatics of the kidney and not in the lacteals themselves? And why are not the feces fraught with a similar fluid as well as the urine? The arteries of the kidneys are, on these occasions preternaturally enlarged, particularly those of the cryptæ or minute glands which secrete the urine. And it is infinitely more probable that the fluid of the diabetes arises from some remarkable change in the vessels usually secreting the urine, than from any imaginary retrograde motion of the chyle through the

lymphatics of the kidneys \*.” Even Dr. Wollaston prefers a state of doubt concerning the course pursued by the above-mentioned substances to an adoption of this conjecture, notwithstanding the ready solution it offers to his experiments. “With respect,” says he, “to Dr. Darwin’s conception of a retrograde action of the absorbents, it is so strongly opposed by the known structure of that system of vessels, that I believe few persons will admit it to be in any degree probable †.”

IV. We come now to the fourth hypothesis to which the disease before us has given rise, and which places it in the kidneys. These form, indeed, the most ostensible seat, and hence, as we have already seen, they were the first suspected, and were supposed by the Greek writers to be in a state of great relaxation and debility, and hence also of great irritability. To this irritability was ascribed their morbid activity, and the accumulation of blood with which they were overloaded: while their weakened and relaxed condition allowed the serous or more liquid parts of the blood to pass off through the patulous mouths of the excretories without restraint or change, and, consequently, in a crude and inelaborated form like the food in a lientery.

Such was the explanation of Galen: and of all the hypotheses before us there is no one that seems to be so fully confirmed, as well by the symptoms of the disease during its progress, as by the appearances it offers upon dissection. The anatomists have hence generally adopted this opinion, which is to be found in Bonet ‡, Ruysch § and Cruikshank ||; and in proof that it has of late been gaining additional ground among physicians and medical practitioners in general, as well on the Continent as in our own country, it may be sufficient to refer to the writings of Richter, the works of M. M. Nicholas and

GEN. III.  
SPEC. IV.  
Paruria  
mellita.  
Saccharine  
urine.  
Further ob-  
jected to by  
Wollaston.

IV. Hypo-  
thesis of a  
primary  
diseased  
state of the  
kidneys.  
Originated  
with the  
Greek  
writers:

especially  
Galen; and  
best con-  
firmed by  
the sym-  
ptoms of  
the disease  
and the ap-  
pearances  
on dissec-  
tion.  
Has hence  
been daily  
gaining  
ground in  
our own  
country  
and abroad.

\* On the Lacteals and Lymphatics, p. 69.

† Phil. Trans. ut supra. 1811. p. 105.

‡ Sepulchr. Lib. III. Sect. xxvi Obs. 1.

§ Observ. Anat. Chir. N. 13.

|| On the Lacteals and Lymphatics, p. 69.

GEN. III.  
SPEC. IV.  
Paruria  
mellita.  
Saccharine  
urine.

IV. Hypo-  
thesis of a  
primary  
diseased  
state of the  
kidneys.

The mor-  
bid state of  
the kidneys  
mostly re-  
garded as  
inflamma-  
tory :

though by  
some writ-  
ers as spas-  
modic :

among the  
last are  
Cama-  
rius,  
Richter,  
Gueude-  
ville and  
Cullen.

Hence dia-  
betes  
placed by  
Cullen in  
his class  
Neuroses.

His reason  
for so do-  
ing.

This reason  
unsatisfac-  
tory :

and appa-  
rently so  
to himself :

Gueudeville, and M. M. Dupuytren and Thenard, already quoted from, and the communications of Mr. Watt, Dr. Henry, and, still more lately, of Dr. Satterley ; several of whom, however, conceive the stomach or some other chylifactive organ to be affected at the same time secondarily or sympathetically.

By far the greater number of these writers regard the irritation of the kidneys as connected with inflammation : though several of them ascribe it to a spasm. They seem to reason from the pain found occasionally in the region of the loins, and the limpidity and enormous quantity of the fluid that is discharged, which in their opinion is analogous to that evacuated in hysteria or hypochondrias ; such was the opinion of Camerarius upwards of a century ago \*, and of Richter and Gueudeville in our own day : “ la phthisurie,” says the last, for under this name he describes saccharine urine, “ est une consommation entretenue par une deviation SPASMODIQUE et continuelle des sucs nutritifs non animalisés, sur l’organe urinaire †.”

There seems after all but little to support this doctrine, and yet it was adopted by Cullen, and that so completely as to induce him to arrange diabetes in his Class Neuroses, and Order Spasmi, immediately before hysteria, and hydrophobia. His reason for doing so is contained in the following passage in his First Lines : “ As hardly any secretion can be increased without an increased action of the vessels concerned in it, and as *some* instances of this disease are *attended* with affections manifestly spasmodic, I have had no doubt of arranging the diabetes under the order of spasmi ‡.” A more unsatisfactory reason has, perhaps, never been offered, nor does the author himself seem satisfied with it, for we find him, shortly afterwards, not indeed, like M. Gueudeville, uniting it with another cause to give it potency,

\* Diss. de Diabete Hypochondriacorum periodico, Tub. 1696.

† Recherches et Expériences Médicales, &c. 8vo. Paris, 1803.

‡ Pract. of Phys. Aph. MDIV.

but abandoning it for this auxiliary cause which seems to be adopted exclusively: for he adds within a few aphorisms, “I think it probable that, *in most cases*, the proximate cause is some fault in the assimilatory powers, or those employed in converting alimentary matter into the proper animal fluids.\*”

But admitting the kidneys to be in a morbid and highly irritable state, which is the oldest, and apparently the best supported doctrine upon the subject, and that this state is connected with an inflammatory action of a peculiar kind, what necessity is there for supposing an idiopathic affection of any other part, whether the stomach or the nerves, the chyloficient or the assimilating powers? And why may not every other derangement that marks the progress of the disease be regarded as consequent upon the renal mischief? I ask the question with all the deference that is due to the distinguished authorities that have passed in review before us, the value of whose writings, and the extent of whose talents no man is more sensible of than myself: but I ask it also, after having studiously attended to the nature of these derangements both in theory and in all the practice which has fallen to my own lot, and with a strong disposition to believe that the whole can be traced and resolved into this single and original source, and consequently that diabetes is a far less complicated disease than has hitherto been imagined.

That an inordinate excitement of the kidneys is capable of augmenting the urinary secretion, whatever be the cause of such excitement, is obvious to every one who has attended to the stimulant effects of spirits drunk to excess, hysteria, and several other irregular actions of the nervous system, and the whole tribe of diuretics.

In all these cases, however, the excitement is only secondary, and follows upon a previous affection of some other organ or part of the system. But in the disease

GEN. III.  
SPEC. IV.  
Paruria  
mellita.  
Saccharine  
urine.

IV. Hypothesis of a primary diseased state of the kidneys,

whence he ascribes the seat of the disease elsewhere to the assimilating powers.

Whether any other part idiopathically affected in conjunction with the kidneys?

Question examined with deference.

Inordinate excitement of the kidneys even when secondary, capable of increasing the flow of urine.

In the present instance the excitement is primary;

\* Pract. Phys. Aph. MXXII.



GEN. III.

SPEC. IV.

Paruria.  
mellita.  
Saccharine  
urine.IV. Hypo-  
thesis of a  
primary  
diseased  
state of the  
kidneys.whence we  
have reason  
to expect a  
still larger  
flux.Argued  
from the ef-  
fects of the  
excited ex-  
cretories of  
the cellular  
membrane  
in dropsy.Analogy  
pursued  
further be-  
tween sac-  
charine  
urine and  
dropsy.

before us, we are contemplating a primary excitement, a morbid action originating and seated in the kidneys themselves. And surely when we reflect upon the prodigious quantity of serum the excretories of the cellular membrane are capable of separating and carrying off from the blood in cellular dropsy, and those of the more limited range of the pleura or the peritoneum in dropsy of the chest or of the belly, there can be no difficulty in conceiving that the emunctory of the kidneys, whose function, when in health, consists in eliminating a very large portion of the more attenuate parts of the blood, should, when in a state of morbid and increased action, be capable of secreting quite as prodigious an excess of fluid as is found secreted in any kind of dropsy whatever. And hence, from a morbid irritation of the kidneys alone, we may, I think, satisfactorily account for the largest quantity of water that is ever discharged in the disease before us, and see with what peculiar force it was denominated by the Greeks HYDERUS (*ὑδρῶς*), or water-flux, as also HYDROPS *matellæ*, or URINAL DROPSY.

This analogy will be still more obvious from our following up the common forms of dropsy to their ordinary consequences, and comparing them with the consequences of diabetes. As the watery parts of the blood in cellular or abdominal dropsy are drawn off with great rapidity and profusion to a single organ, every other organ becomes necessarily desiccated and exhausted; the skin is harsh and dry, the muscles lean and rigid, the blood-vessels collapsed, the bowels costive, and the adipose cells emptied of their oil. Every part of the system is faint, and languishes for a supply, and hence that intolerable thirst which oppresses the fauces and stomach, and urges them by an increased action to satisfy the general demand. This is a necessary effect of so profuse a depletion, be the cause what it may: and we have reason, therefore, to augur *à priori* that such an effect must follow in this form of the Greek HYDERUS or water-flux. That it *does* follow we have already seen; and we are hence led almost insensibly to adopt, in its

fullest latitude, the correct doctrine of Dr. Latham, that "the increased appetite in this last disease, however great it may be, is a natural sensation, calling into its full exercise that organ through which the constant waste of the body must be directly supplied, and without which the patient must soon inevitably perish\*."

From a morbid excitement, then, a weak and irritable inflammation, if I may be allowed the expression, of the kidneys alone, we are able to account, not only for all the local symptoms of an enormous flux of water, lumbar, or hypochondriac pains, and occasionally fullness, and the post-obit appearances of distended or "preternaturally enlarged arteries," as observed by Mr. Cruikshank, "blood-vessels more crowded than in a natural state, so as in some parts to approach to the appearance of inflammation," as observed by Dr. Baillie, "ossified arteries," as observed by Mr. Gooch, and "a glutinous infarction of the parenchyma of the kidneys," as observed in other cases by Plenciz †; but also for all the constitutional symptoms of a dry, harsh, and heated skin, general emaciation, and sense of exhaustion, depression of animal spirits, great thirst and voracious appetite. In dropsy, indeed, the appetite is not uniformly voracious, nor is it always so in diabetes: but that inanition of almost every kind has a tendency to produce this system, where the tone of the stomach is not interfered with or has re-established itself, is manifest from its occurring so commonly after severe fatigue, long fasting, protracted fevers, or any other exhausting state of body. And hence the very existence of the symptom in diabetes is a direct proof that the action of the stomach, instead of being morbid, is perfectly sound though inordinately excited.

But the grand question, it may, perhaps, be said, still remains untouched. How are we to account for that

GEN. III.  
SPEC. IV.  
Paruria  
mellita.  
Saccharine  
urine.

IV. Hypo-  
thesis of a  
primary  
diseased  
state of the  
kidneys.  
Hence all  
the known  
symptoms  
of saccha-  
rine urine  
may arise  
from a mor-  
bid excite-  
ment of the  
kidneys  
alone.

The asser-  
tion of a  
fused or dis-  
solved state  
of the blood  
examined.

\* Practical Treatise, &c. i. p. 417.

† Acta et Observationes Med. p. 153.

GEN. III.

SPEC. IV.

Paruria  
mellita.  
Saccharine  
urine.

IV. Hypo-  
thesis of a  
primary  
diseased  
state of the  
kidneys.

Does such a  
state ex-  
ist ?

Facts illus-  
trative of  
the con-  
trary.

crude, fused, or dissolved state of the blood, which appears so conspicuously in diabetes, and which reduces it from an animalized to a vegetable crasis? Now upon this point, let us fairly put to ourselves this previous question: Does such a state of the blood appear at all? and is it in fact reduced or changed in any respect from its animalized character antecedently to its arrival at the morbid organ of the kidneys? So far as we have been able to obtain information from chemical experiments, the blood of a diabetic patient continues in full possession of its animalized qualities, and evinces no approach towards those of vegetable fluids: and so far as we can judge from its being drawn from the arm during life, instead of evincing a thin, dissolved, and colourless state, it discovers that very condition which we should anticipate as a natural consequence of a very copious abstraction of its serous or more liquid, principles. For we are told, without a dissentient voice, by those who have drawn blood freely and repeatedly during the disease, that it has the general appearance of treacle; thicker than natural from the drain of its finer parts, and darker from a closer approximation of its red corpuscles, little capable of coagulability from its loss of coagulable lymph, and hence not separating by rest into a proper serum and crassament. And we are told farther that wherever venesection has been serviceable, and the renal flux has diminished, the latter instantly assumes a greater disposition to coagulate, and loses the darkness of its hue.

How far the  
present  
morbid ex-  
citement  
of the kid-  
neys may  
be sufficient  
to produce  
the chemi-  
cal change  
that takes  
place in the  
urine.

The diffi-  
culty not  
lessened by  
transfer-  
ring this ac-  
tion to the  
assimilating  
powers.

The grand reason, after all, for supposing that this change from an animalized to a vegetable, or rather from an uric to an oxalic character, takes place in the blood itself, is from the difficulty of conceiving how it can take place in the kidneys: the difficulty of explaining how an organ whose common function is to secrete alkalies, and an acid strictly animal, should be brought to secrete an acid directly vegetable. But, in the first place, is the difficulty one which is diminished by transferring this wonderful change of action to the assimilating powers, or to the stomach, or to any other organ? For

let us lay the fault where we will, we are still involved in the dilemma of supposing, that an animal structure whose healthy function consists in the formation of ammonia, has its action so perverted by the disease before us, as to produce sugar in its stead. And hence, by enlisting the assimilating powers into service upon the present occasion, we only gain two levers instead of one. We place the globe upon the elephant instead of upon the tortoise, but we have still to inquire what it is that supports the latter.

There are, however, if I mistake not, various pathological and physiological facts perpetually occurring before our eyes, which if properly applied, may at least reconcile us to this supposed anomaly, if they do not explain its nature: a very few of which I will briefly advert to.

We see a tendency in most animal organs to produce sugar under particular circumstances, whatever be the character of their ordinary secretion; and this both in cases of health, where we have no ground for supposing an imperfectly animalized fluid; and in cases of disease where such a change may perhaps be contended for and supported: and we see this also, and equally, under an animal and under a vegetable diet; in some instances, indeed, most so where the former predominates. No one, if he did not know the fact, would predict that the breast of a healthy woman, which forms no sugar at any other time, would become a saccharine fountain immediately after child-birth; and still less so that an animal diet, or a mixed diet of animal and vegetable food, would produce a larger abundance than a vegetable diet alone: and least of all, that woman's milk produced by animal food would yield more sugar in a given quantity than ass's, goat's, sheep's, or cow's; and less caseous matter than any of these quadrupeds \* though this last is the

GEN. III.  
SPEC. IV.

Paruria  
mellita.  
Saccharine  
urine.

IV. Hypo-  
thesis of a  
primary  
diseased  
state of the  
kidneys.

The subject  
explained  
generally.

Sugar pro-  
duced by  
most organs  
under par-  
ticular cir-  
cumstances  
both of  
health and  
disease:

as also  
under an  
animal or  
vegetable  
diet.

The female  
breast in a  
state of  
health pro-  
duces more  
sugar under  
an animal  
than a vege-  
table diet  
and more in  
proportion  
than most  
quadrup-  
eds: while it  
yields less  
caseous or  
animalized  
matter.

\* *Experimens des M. M. Stipriaan, Liviscius, et D. Bondt, in Mem. de la Societ  de Med.   Paris. 1788.*



GEN. III.

SPEC. IV.

Paruria  
mellita.Saccharine  
urine.IV. Hypo-  
thesis of a  
primary  
diseased  
state of the  
kidneys.Sugar pro-  
duced by  
the salivary  
glands and  
lungs, when  
in a morbid  
state.Oxalic acid  
or the basis  
of sugar se-  
creted from  
the skin.Gastric  
juice neu-  
tral in om-  
nivorous  
animals ;alkaline in  
graminivo-  
rous,  
and acid in  
carnivo-  
rous.Hence the  
difficulty  
diminished  
in conceiv-  
ing that  
the kidneys  
may in a  
morbid  
state se-  
crete sugar.

only matter of a strictly animalized quality which milk of any kind contains.

This, however, is a natural process. Yet under the action of a morbid influence sugar is often produced in other organs, while what should be sugar in the mammæ is changed to some other substance. Under the genus *Ptyalismus*, we have observed, that the saliva is sometimes so impregnated with a saccharine principle as to acquire the name of *p. mellitus* \* : it is indeed by some authors represented as having the sweetness of honey. Pus, under various circumstances, evinces a sweetish taste, and hence the occasional sweetness of the sputum in consumptive patients. So in fevers of various kinds, as we have already had several occasions to observe, and particularly in hectic fever, the sweat throws forth a vapour strongly impregnated with acetous acid. Even the ceramen sometimes both smells and tastes sweet ; a fact noticed by Hippocrates, who at the same time remarks that it is a fatal symptom.

As an animal product it might be reasonable to expect that the gastric juice would be alkaline, and it is so in some animals : yet those who have paid but little attention to animal chemistry will be surprised to learn that while it is for the most part neutral in animals that feed jointly on flesh and vegetables, it is alkaline in ruminating and graminivorous animals, or those that feed on grass, and acid in carnivorous animals, as the falcon, hawk, and heron. Upon which points the experiments of Brugnatelli†, coincide with those of Carminati and Macquart.

It is unnecessary to pursue these illustrations any further. Candidly reflected upon they cannot fail, I think, to diminish in a considerable degree, the repugnance which the mind at first feels in admitting a secretion of sugar

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\* Vol. i. p. 80.

† Saggio d'un Analisi Chimica di Succo gastrici.

Vide Crell, Beitrag. zu dem Chem. Annal. 1787.

by an organ, whose common function is so inaccordant with such a production: and consequently they co-operate in leading us to the conclusion which it has been the design of these remarks to arrive at, that *paruria mellita*, or diabetes, is a disease seated in the kidneys alone, and dependent upon a peculiar irritability or inflammation of the renal organ.

Of the predisposing or occasional causes of this disease, however, we are still involved in considerable darkness; with the exception that whatever debilitates the system seems at times to become a predisponent, and only requires some peculiar local excitement to give birth to the disease, without which it is in vain to expect that it should take place. Hence it occurs to us, in some instances, as a consequence of old age, in others of a constitution broken down by intemperance or other illicit gratifications; in others again of a diseased liver, or diseased lungs\*, of atonic gout, or suppressed eruptions: and particularly of chronic carbuncles, or ill-conditioned sores approaching to their nature, and showing like themselves a considerable degree of constitutional debility.

I am greatly obliged to Dr. Latham for calling my attention to this last fact while drawing up the present history of the disease, and for referring me in support of his own opinion upon this subject to the following passage in Cheselden: "There is sometimes a large kind of boil or carbuncle in this membrane, which first makes a large slough and a number of small holes through the skin which in time mortifies and casts off, but the longer the slough is suffered to remain the more it discharges, and the more advantage to the patient: at the latter end of which case the matter has a bloody tincture, and a bilious smell, exactly like what comes from ulcers in the

GEN. III.

SPEC. IV.

Paruria  
mellita.  
Saccharine  
urine.IV. Hypo-  
thesis of a  
primary  
diseased  
state of the  
kidneys.General  
result of the  
inquiry.Predispo-  
nent and  
occasional  
causes.Whatever  
debilitates  
the system  
becomes  
a predispo-  
nent, and  
only re-  
quires an  
exciting  
cause.Old age:  
a broken  
constitu-  
tion:intempe-  
rance:  
a diseased  
liver:diseased  
lungs:atonic gout:  
chronic  
carbuncles  
or other ill-  
conditioned  
sores.The last  
particularly  
pointed out  
to the au-  
thor by  
Latham,  
in a passage  
from Che-  
selden.

\* See Case in Latham's Tracts, &c. p. 142, as also the remarks already quoted from Dr. Bardsley.

GEN. III.  
SPEC. IV.  
Paruria  
mellita.  
Saccharine  
urine.  
IV. Hypo-  
thesis of a  
primary  
diseased  
state of the  
kidneys.  
Confirmed  
by his own  
practice.

liver; and both these cases are attended with SWEET URINE as in DIABETES\*.”

In concurrence with this remark of Cheselden, Dr. Latham informs me in a letter as follows: “I have a patient at this moment, whose diabetes was first observed after a long confinement from carbuncle: he is upwards of seventy, and is moreover afflicted with a mucous discharge from the internal coats of the bladder.” Not dissimilar to which, is the following case, which is well worthy of notice, and occurs among the earliest, in Dr. Latham’s treatise on this disease. “About the year 1789 there was a most remarkable case of diabetes in St. Bartholomew’s hospital, under the immediate care of the late greatly to be lamented Dr. David Pitcairn. The patient’s history of himself was this: that a rat had bitten him between the finger and thumb, that his arm had swelled violently, and that boils and abscesses had formed, not only in that arm but in other parts of the body: that his health from that time had decayed, and emaciation followed. His urine had then the true diabetical character both in quantity and quality: the saccharine part was in very great proportion, constantly oozing through the common earthen pot over the glazing, and affording an infinity of pure saccharine crystals, adhering like hoar-frost to the outside of the utensil, and which were collected by myself and by every medical pupil daily, in great abundance †.”

Whether  
the prox-  
imate cause  
be a change  
in the ani-  
mal elec-  
tricity;

How far the grand agent in this change of renal action, admitting the disease to be seated in the kidneys, is to be ascribed to a change in the quality or intensity of the nervous power transmitted to it, or, as the chemists call it, in the state of the animal electricity of the organ, to which power Dr. Wollaston has referred the production and distinction of all the secretions, I am not prepared to say: but the subject ought not to be concluded without noticing this conjecture, which at the same time imports,

\* Anatomy, 8vo. p. 139.

† Facts and Opinions p. 134.

on the part of those who hold it, an admission of the general principle of the disease which I have endeavoured to support. "Since," says Dr. Wollaston, "we have become acquainted with the surprising chemical effects of the lowest states of electricity, I have been inclined to hope that we might from that source derive some explanation of such phænomena. But though I have referred secretion in general to the agency of the electric power with which the nerves appear to be indued, and am thereby reconciled to the secretion of acid urine from blood that is known to be alkaline, which, before that time, seemed highly paradoxical, and although the transfer of the prussiate of potash, of sugar, or of other substances may equally be effected by the same power, as acting cause, still the channel through which they are conveyed remains to be discovered by direct experiment\*."

GEN. III.  
SPEC. IV.  
Paruria  
mellita.  
Saccharine  
urine.  
IV. Hypo-  
thesis of a  
primary  
diseased  
state of the  
kidneys  
as con-  
jectured by  
Wollaston.

Whilst such is the diversity of opinions which have been held concerning the pathology of honeyed paruria it cannot be a matter of much surprise that the proposed plans of treatment should also exhibit a very great discrepancy.

Great di-  
versity in  
the pro-  
posed plans  
of medical  
treatment.

On a first glance, indeed, and without keeping the grounds of these distinct opinions in view, nothing can be more discordant or chaotic than the remedial process proposed by different individuals. Tonics, cardiacs, astringents, and the fullest indulgence of the voracious appetite in meals of animal food, with a total prohibition of vegetable nutriment on the one side, and emetics, diaphoretics, and venesections to deliquium, and again and again repeated, on the other: while opium in large doses takes a middle stand, as though equally offering a truce to the patient and the practitioner.

At first  
sight most  
confused:

It is easy, however, to redeem the therapeusia of the present day from the charge of inconsistency and confusion, to which at first sight it may possibly lie open. Different views of the disease have led to different inten-

but re-  
deemable  
from this  
charge  
when  
closely ex-  
amined:  
different  
views  
having led  
to different  
intentions  
as follow.

\* Phil. Trans. 1811. p. 105.



GEN. III.  
SPEC. IV.  
Paruria  
mellita.  
Treatment

tions : but so long as these intentions have been clearly adhered to, how much soever they may vary in their respective courses, they are free from the imputation of absurdity. These intentions have been chiefly the following :

I. To invigorate the different organs and consolidate the blood.

I. To invigorate the debilitated organs whether local or general, and to give firmness and coagulability to the blood.

The object of the Greeks and pursued to a late period :

This was the object of all the Greek physicians, and it regulated the practice to a very late period in the history of the disease. "The vital intention," says Dr. Willis, "is performed by an incrassating and moderately cooling diet ; by refreshing cordials, and by proper and seasonable hypnotics." Hence agglutinants of all kinds were called into use, as tragacanth, gum arabic, and the albumen of eggs ; and these were united with astringents as rhubarb, cinnamon, and lime-water, with or without an anodyne draught at evening as might be thought prudent.

Willis :

Sydenham.

Sydenham carried the tonic and cardiac part of this plan considerably further than Willis : for while the latter chiefly limited his patients to milk or a farinaceous diet, the former allowed them an animal diet, with a vinous beverage. "Let the patient," says he, "eat food of easy digestion, such as veal, mutton, and the like, and abstain from all sorts of fruit and garden-stuff, and at all his meals drink Spanish wine."

Medicines chiefly employed.

This plan continued in force with little variation, except as to the proportionate allowance of animal and vegetable food, till within the last thirty years. The chief tonic medicines being the warm gums, or resins, astringents and bitters. Alum and alum-whey appear to have been in particular estimation with most practitioners. They were especially recommended by Dr. Dover and Dr. Brocklesby in our own country, and by Dr. Herz\* on the Continent. Dr. Brisbane, and Dr. Oostendyk†, on the contrary assert, that in their hands

\* Sell Neuc Beiträge. i. 124.

† Samml. auserl. Abhandl. für Pract. aerzte. B. i. 179.

they were of no use whatever. Sir Clifton Wintringham applied alum dissolved in vinegar, as a lotion, to the loins. The other astringents that have been chiefly had recourse to are lime-water, as noticed already, chalybeate waters, kino and catechu in tincture, powder, and decoction; none of which, however, seem to have been eminently serviceable. While cantharides as a local astringent has been exposed to a very extensive range of experiment both at home and abroad. Dr. Morgan gave it in the tincture, Dr. Herz in the form of powder, and both esteemed it salutary. Dr. Brisbane tried it in the first of these ways, giving from twenty to thirty drops, twice a-day: but appears to have been as dissatisfied with cantharides as with alum, and declares that all astringents are hurtful, as Amatus Lusitanus \* asserted long before, that they are of no use.

II. A second intention of pathologists in the present disease has been that of adding to the deficient animal salts, and resisting the secretion of sugar, by confining the patient to a course of diet and medicines calculated to yield the former, and to counteract the latter.

This intention may have been indirectly acted upon by some part of the process we have just noticed, and particularly by the dietetic plan of Sydenham: but it is to Dr. Rollo that the medical world is immediately indebted for its full illustration, and the means of carrying it directly into effect, which consists in enforcing upon the patient an entire abstinence from every species of vegetable matter, and consequently limiting him to a diet of animal food alone: some form of hepatized ammonia being employed as an auxiliary in the mean time. Narcotics, as under the preceding intention, are also occasionally prescribed by Dr. Rollo: and, in accordance with his doctrine that the stomach is the chief seat of morbid action, and that the thirst and voracity are indi-

GEN. III.  
SPEC. IV.  
Paruria  
mellita.  
Saccharine  
urine.  
Treatment  
I. To invigorate the  
different  
organs and  
consolidate  
the blood.

II. To add  
to the defi-  
cient ani-  
mal salts  
and resist  
the secre-  
tion of  
sugar.

Indirectly  
pursued by  
a part of  
the pre-  
ceding  
plan:  
but only  
perfected  
by Rollo:  
outline of  
his practice.

\* Cent. v. Cur. 33.

GEN. III.  
SPEC. IV.  
Paruria  
mellita.  
Saccharine  
urine.  
Treatment.  
II. To add  
to the defi-  
cient ani-  
mal salts,  
and resist  
the secre-  
tion of  
sugar.  
Checking  
the vigor-  
ous desire  
of the  
stomach  
for food  
opposed by  
Latham;  
the rest of  
Rollo's plan  
acceded to.  
Phosphoric  
acid on  
what  
ground  
recom-  
mended.  
How far  
consistent  
with the  
professed  
intention of  
cure.

How far  
productive  
of success.

cations of such action, the aid of an emetic is occasionally called in to allay the high-wrought excitement.

From this last part of Dr. Rollo's curative method Dr. Latham appears to dissent upon the ground, and in the present author's opinion a correct ground, that the increased action of the stomach proceeds from a sound instead of from a morbid appetency: but to the injunction of an exclusive use of animal food, and a total abstinence from fermented and fermentable liquors, he accedes, with a full conviction of its importance, and without permitting the smallest deviation. And as Dr. Rollo, with a view of completing the intention of supplying the readiest means for a recruit of the deficient animal salts, prescribed hepatised ammonia as an auxiliary, Dr. Latham, for the same purpose, prescribes phosphoric acid, having observed in various cases of the disease an evident deficiency in the supply of phosphate of lime; whence, indeed, the destruction that is occasionally met with of the fangs of the teeth together with their alveolar processes.

Some severe remarks, which I am at a loss to account for, have occasionally been thrown out upon this last recommendation since the publication of Dr. Latham's very candid and ingenuous work. The idea is in perfect accordance with his own view of the general nature of the disease; and, in every view of it, is more likely to be of service than Dr. Rollo's hepatised ammonia, or, perhaps, than alkalies of any kind. For while, like the last, it has been suggested upon the principle of supplying to the kidneys the deficient materials upon which they are to work, it has a claim to attention as a very valuable tonic and astringent, even by those who may abjure this principle as incorrect, and particularly by the advocates for the mineral acids. I ought not indeed, while upon this subject, to conceal the following paragraph of a letter in direct allusion to it, addressed to me by Dr. Latham, so lately as May 26 of the current year, in which he communicates with much candour his present opinion upon the general line of practice he thus undertook to recom-

mend to the public, little less than twelve years ago. "The experience," says he, "which I have had in diabetes since the publication of my observations on that disease, does not excite, in any degree, a wish to alter the opinions which I had then formed concerning it: and I am more and more convinced that although my theory may be wrong, the practice has been successful. As to the theory about the phosphoric acid, I cannot help thinking that there is more in it than I ever suspected: be that however as it may, I urge my patients to persevere in its use, and am certain that it may do something more than produce a mitigation of the thirst, which circumstance of itself would be sufficient to maintain it as a remedy even if it went no further in effecting a cure."

III. Some of the indications of the disease, however, have given rise to a much bolder intention. We have already seen that, from a few of its symptoms, and the appearances discoverable on dissection, there is reason to apprehend an irritable and inflammatory state of the kidneys; and it has hence been attempted to cut short the complaint, and, so to speak, to strangle this condition at its birth, by copious and repeated bleedings. Le Fevre appears to have adopted and acted upon this principle almost as early as the beginning of the preceding century\*; but he does not seem to have obtained any considerable number of converts to his opinion; and it is to Dr. Watt of Glasgow that we are principally indebted for whatever advantages may have resulted from this mode of practice in our own day; and particularly for trusting to it mainly or exclusively, and carrying it to a very formidable extent. The plan pursued by Dr. Watt has since been pursued by Dr. Satterley, and the success obtained by the former has apparently been more than equalled by the latter, in the course of various trials, of which a very interesting account is detailed in a late volume of the Medical Transactions†. These trials embrace four distinct cases, the first of which

GEN. III.  
SPEC. IV.  
Paruria  
mellita.  
Saccharine  
urine.  
Treatment.  
II. To add  
to the defi-  
cient ani-  
mal salts,  
and resist  
the secre-  
tion of  
sugar.

III. To cut  
short the  
inflamma-  
tory state  
of the kid-  
neys by  
copious and  
repeated  
venesections.

Early acted  
upon by  
Le Fevre.

Revived by  
Watt.

Supported  
by Satter-  
ley.

Series of ex-  
periments  
of the  
latter.

\* Opera, p. 134. Verunt, 1737. 4to.

† Vol. v. Art. 1.



GEN. III.  
SPEC. IV.  
Paruria  
mellita.  
Saccharine  
urine.  
Treatment.  
III. To cut  
short the  
inflamma-  
tory state  
of the kid-  
neys by  
copious and  
repeated  
venesections.

is given most at length. The patient was thirty-two years of age: and had been in a state of progressive debility for nearly six months, brought on in the first instance, as was apprehended, by his having drunk copiously of cold water when overheated. He fell under Dr. Satterley's care in consequence of being taken to the Middlesex Hospital; the symptoms were strongly marked, and the disease unequivocal: the pulse was quick, small, and hard. Fourteen ounces of blood were taken from the arm on the day after his admission, which was Feb. 19, 1808: he was put upon a meat diet, with an allowance of drink sufficient to allay, though not to satiate, his distressing thirst. The abstraction of blood appearing to afford relief, eighteen ounces more were taken from him the next day, the 20th; twenty ounces more on the 23d; the same quantity on the 25th; and eighteen ounces successively on the 28th, on March the 3d, and March 11th: making a total of a hundred and twenty-six ounces in twenty days. On the day and night of admission, he had evacuated sixteen quarts of urine; after the first use of the lancet, the quantity was reduced to eleven quarts in twenty-four hours; after the second, to six quarts; after the third, it varied from five to seven quarts; after the fourth, it stood at six; after the fifth, it varied from five to six; after the sixth, it sunk below five; and at the time of the seventh, was calculated at three, and had sometimes been not more than two: at which time his morbid thirst had entirely left him, he was in tolerably good health, and increased in strength and size. In consequence of some pneumonic symptoms, he was afterwards bled once or twice, and detained in the hospital for a long period of time, though the term is not stated. He was, however, at length discharged cured, and was found several years afterwards to have kept free from any return of the complaint.

Accompanying regimen and course of medicines.

The regimen and accompanying course of medicines are not very accurately stated. He seems to have been limited to a diet of animal food; to have used alternately

as a part of his beverage alum-whey and lime-water; to have taken occasionally calomel, and castor-oil, and for a part, if not the whole period, a grain of calomel and a dose of compound powder of ipecacuan every night, the quantities of which are not given. But it was the depleting plan that was altogether depended upon, and no very minute attention was paid to any thing else.

The two next cases admitted of easier cure under the same treatment. The patients were both males. The fourth case breaks off incompletely, for, in consequence of a removal of the patient, the termination was not known.

In each of these there was the local symptom of great pain in the loins, which in the first is described as having been “always severe but at times excessively acute.” Here also the testicles were occasionally retracted; and in one of two female cases there was a distressing itching in the pudendum: so that there is reason to conclude that these instances were accompanied with a more than ordinary degree of irritability or inflammation. “This,” says Dr. Satterley, “is the extent of my experience respecting bleeding in diabetes: an experience that fully warrants my asserting the safety, and I think the efficacy, of the practice, *in some species* of this complaint.”

IV. It has, however, been thought possible by other practitioners, to subdue the irritation whether local or general, and is often strikingly conspicuous, by powerful narcotics repeated in quick succession; and thus to obtain a cure without that increase of debility which, in many cases, must necessarily ensue upon an active plan of depletion—and this has constituted a fourth intention.

Anodynes, though of no great potency, were occasionally administered by Willis and Sydenham; and their benefit was expressly insisted upon by Buckwald\*. The ordinary form has been that of Dover’s powder, thus aiming at a diaphoretic as well as a sedative effect: and in this form it has sometimes been found successful, particularly in a case published by Dr. M’Cormick in the Edinburgh

GEN. III.  
SPEC. IV.  
Paruria  
mellita.  
Saccharine  
urine.  
Treatment.  
III. To cut  
short the  
inflamma-  
tory state  
of the kid-  
neys by  
copious and  
repeated  
venesections.  
Further  
illustrated.

IV. To sub-  
due the  
irritation  
by a quick  
repetition  
of power-  
ful nar-  
cotics.

This plan  
also parti-  
ally pur-  
sued by  
Willis and  
Sydenham.  
Tried in  
conjunction  
with dia-  
phoretics by  
M’Cormick.

\* Dissert. de Diabetis curatione, &c.

GEN. III.  
SPEC. IV.  
Paruria  
mellita.  
Saccharine  
urine.  
Treatment.  
IV. To sub-  
due the  
irritation  
by a quick  
repetition  
of power-  
ful nar-  
cotics.  
Tried  
simply and  
most power-  
fully by  
Warren.  
Summary  
of his ex-  
periments.  
Ipecacuan  
in union  
with lauda-  
num, a clog  
upon the  
latter.

Medical Commentaries \*: but I am not aware that nar-  
cotics alone have been relied upon, or their effects com-  
pletely ascertained before the late experiments of Dr. P.  
Warren, an interesting statement of which he has com-  
municated in the same work that contains Dr. Satterley's  
practice in venesection †. These experiments embrace  
the progress of two cases that occurred under Dr. War-  
ren's care in St. George's Hospital. In the first he  
directed his attention, like Dr. M'Cormick, to opium,  
in conjunction with some relaxant; and hence made  
choice of the compound powder of ipecacuan. So far  
as the present cases go, however, they prove very satisfac-  
torily that whatever benefit is derivable from the use of  
this valuable medicine, depends far more upon its sedative  
than its sudorific power. Dr. Warren, indeed, seems  
rather to have found the latter a clog upon his exertions,  
as he could not carry the opium far enough to produce  
a permanent effect on account of the nausea or vomiting  
occasioned by the ipecacuan, from which symptoms no  
benefit whatever appeared to be derived. In his first  
case, therefore, he soon trusted himself to opium alone,  
and persevered in the same practice through the second.

These patients also were in the prime or middle of life:  
the one aged twenty-two, the other thirty-eight: and  
both had been declining for some months antecedently to  
their applying to St. George's Hospital for relief. The  
first seems to have been worn down by the fatigue of  
journeying, and was considerably disordered, before the  
attack of diabetes, in his stomach and bowels. When re-  
ceived into the hospital, however, with this last complaint  
upon him, he had a considerable pain in his back and  
loins. Of the origin of the second case no account is  
given. To ascertain whether an animal diet would suc-  
ceed by itself, or whether it be of any collateral advan-  
tage, the patients were sometimes restricted to animal

Animal diet  
seems in  
this case to  
have been  
of use: but  
the con-  
trary con-  
cluded by  
Warren.

\* Vol. ix. Art. ii. p. 56.

† Vide supra.

food alone, to opium alone, and to opium with a mixed diet of animal and vegetable food. It appears to me from the tables that the animal regimen was of advantage, but certainly not alone capable of effecting a cure, for in every instance the quantity of urine increased and became sweeter, whatever the diet employed, as soon as the opium was diminished. Dr. Warren, however, is inclined to think that it was of no avail whatever; and, consequently, the second patient had no restriction upon his food, whether animal or vegetable. The quantity of opium given was considerable. When Dover's powder was employed it was gradually increased from a scruple to a drachm twice a-day. And when opium was employed alone, or with kino, with which it was for a short time mixed, but without any perceptible advantage, it was augmented from four grains to six grains and a half twice a-day in one patient: and to five grains four times a-day in the other. It is singular that the opium seldom produced constipation. Few other medicines were employed\*.

The disease in both cases was as decided as in the preceding treated by venesection: but the flow of urine was much less, the maximum in the one patient being only fifteen, and in the other only eight pints in the twenty-four hours: and the cure occupied a much longer period of time; running on to nearly four months in the first instance, and to more than six in the second.

The sum of the whole appears to be that *paruria mellita* attacks persons of very different ages, constitutions, and habits, and hence, in different cases, demands a different mode of treatment: and that the morbid action is seated in the kidneys; with the irritable, and, often, inflammatory, state of which all the parts of the system more or less sympathize. It appears that under a diet of animal food strictly adhered to the tendency to an excessive secretion, and particularly to a secretion of saccharine matter is much less than under any other kind

GEN. III.  
SPEC. IV.  
Paruria  
mellita.  
Saccharine  
urine.  
Treatment.  
IV. To sub-  
due the  
irritation  
by a quick  
repetition  
of power-  
ful nar-  
cotics.

General  
result of the  
investiga-  
tion in  
respect to  
treatment.

\* Med. Transact. Vol. iv. Art. xvi. p. 188.



GEN. III.  
SPEC. IV.  
Paruria  
mellita.  
Saccharine  
urine.  
General re-  
sult of the  
investiga-  
tion.

of regimen, though, from idiosyncrasy or some other cause, this rule occasionally admits of exceptions. It appears also that the irritation is in some instances capable of being allayed, and at length completely subdued by a perseverance in copious doses of opium, probably by an exhaustion of the general excitability; and in others by a free use of the lancet, leading more rapidly to a like effect. The skin, through the progress of this complaint, does not seem to catenate in the action of the kidneys so much as in many others, except in a few individuals; and hence diaphoretics are rarely of advantage. As the irritability of the affected organ is connected with debility and relaxation, tonics are frequently found serviceable, and particularly the astringents; those mostly so, that are conveyed to the kidneys with the least degree of decomposition. And hence the advantage that has been so often found to result from an use of lime-water, alum-whey, and many of the mineral springs. The mineral acids are, on this account, a medicine of very great importance, and in some instances have been found to effect a cure alone; of which Mr. Earnest has given a striking proof in a professional journal of reputation\*. Their sedative virtue is nearly equal to their tonic, and they surpass every other remedy in their power of quenching the distressing symptom of intolerable thirst. Cinchona and various other bitters have been tried, but have rarely proved successful. Some benefit has occasionally been derived from irritants applied to the loins, and especially from caustics; but these have also failed.

Sangui-  
neous de-  
pletion  
cannot form  
a general  
practice,  
and why.

How advantageous soever the plan of sanguineous depletion may be found occasionally, it is clear that it cannot be had recourse to generally, for the present disease, is, for the most part, though by no means always, a result of advanced years and of a debilitated constitution. Under such circumstances, indeed, it has uniformly occurred to the present writer, in the few instances he has been called upon to superintend it, in which, while the

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\* Medical Journal, Vol. xiii.

thirst was intense, the appetite by no means kept pace with it, and was sometimes found to fail completely. Where, on the contrary, the constitution does not seem seriously affected, and the soundness and, indeed, vigour of the stomach and collatitious viscera are sufficiently proved by the perpetual desire of food to supply the waste that is taking place, a free use of the lancet may probably be allowed as offering what may be called a royal road to the object of our wishes: but the practice should, I think, be limited to this state of the animal frame; since, while this favourable condition of the digestive organs remains, whatever be the prostration of strength induced by the lancet, it will soon be recovered from.

By what means an animal diet effects the beneficial change that so generally follows from its use, has never, that I know of, been distinctly pointed out: but there is a fact of a very singular kind that has lately been discovered in animal chemistry which is, I think, capable of throwing a considerable light upon the subject. In healthy urine, the predominant principle is that of uric acid, in diabetic, that of saccharine or oxalic. The uric acid, indeed, exists so largely in sound urine as to be always in excess, as we shall have occasion to observe under LITHIA or URINARY CALCULUS. It is not only a strictly animal acid, but till of late years was supposed to exist in no other urine than that of man; though it has since been found, but in a smaller proportion, in the urine of various other animals. Whatever then has a tendency to reverse the nature of the acid secretion in the disease before us, to produce uric instead of oxalic acid, and in this respect to restore to the urine its natural principle, must go far towards a cure of the disease, as well by taking off from the kidneys a source of irritation, and hereby diminishing the quantity of the secretion, as by contributing to the soundness of the urine itself. Now the physiological fact I refer to is, that animal food has a direct tendency to induce this effect: for Dr. Wolaston has satisfactorily ascertained that a greater quan-

GEN. III.

SPEC. IV.

Paruria

mellita.

Saccharine urine.

General result of the investigation.

Where it may possibly prove successful.

Explanation attempted by what means animal diet proves beneficial.

Singular analogy, illustrative of this effect.

GEN. III.  
SPEC. IV.  
Paruria  
mellita.  
Saccharine  
urine.  
Treatment.

tity of uric acid is produced in the dung of birds in proportion as they feed on animal food: and he has hence ingeniously suggested, that where there is an opposite tendency in the system to that we are now contemplating, a tendency to the secretion of an excess of uric acid, as in the formation of uric calculi and gouty concretions, this evil may possibly be obviated by a vegetable diet.

## SPECIES V.

### PARURIA INCONTINENS.

#### Incontinence of Urine.

FREQUENT OR PERPETUAL DISCHARGE OF URINE, WITH  
DIFFICULTY OF RETAINING IT.

GEN. III.  
SPEC. V.

THIS is the enuresis of most of the nosologists, and admits of four varieties from diversity of cause and mode of treatment, with often a slight diversity in some of the symptoms.

- |             |   |
|-------------|---|
| α Acris.    | From a peculiar acrimony in the fluid secreted.                 |
| β Irritata. | From a peculiar irritation in some part of the urinary channel. |
| γ Atonica.  | From atony of the sphincter of the bladder.                     |
| δ Aquosa.   | From superabundant secretion: the fluid limpid and dilute.      |

α P. incont-  
tinensacris.  
Acrimoni-  
ous incont-  
tinence of  
urine.

In the FIRST VARIETY, proceeding from a peculiar acrimony of the secreted fluid, the cause and effect are mostly temporary; as too large a portion of spirits

combined with certain essential oils as that of the juniper-berry. Diluents and cooling laxatives offer the best cure.

GEN. III.  
SPEC. V.

In the SECOND VARIETY, the irritation usually proceeds froms and or gravel, or some foreign substance, as hairs, accidentally introduced into the urethra. We have some accounts, however, of a discharge of hairs in such quantities that it is not possible to ascribe the affection to an accidental cause; and we should rather, perhaps, resolve them into a preternatural growth of hair in the bladder itself, an idea the more tenable as we shall have to observe, in due time, that calculi of the bladder have occasionally been discharged or found after death surmounted with down. In this case the disease may be regarded as a species of trichosis, under which name it is described by Goelicke \*, as it is under that of trichiasis by Scultetus†. But at present we are in want of decisive information upon the subject. If the last view be correct, filling the bladder with injections of lime-water or any other depilatory liquid of as much acrimony as the bladder will bear without injuring its internal and mucous surface, will be the best mode of cure.

♂ P. incontinens irritata. Irritative incontinence of urine. Sometimes hairs discharged and in abundance, as though grown in the bladder; and hence described as a species of trichosis or trichiasis.

Frequently, however, the irritation is that of simple debility: and hence, tonics and stimulants, as the terebinthinate or even the tincture of cantharides, may be employed internally with success, while externally we prescribe blisters to the perinæum, or the cold water of a bidet. Pressure is also of great service in many instances. In the sixth volume of the Medico-Chirurgical Transactions, Mr. Hyslop gives a case of nine years' standing, in which a cure was effected in three days by binding a bougie tightly to the urethra through its course by means of adhesive plaster. And Mr. Burns gives another case, in the same volume, in which great benefit

Frequently an irritation of simple debility. Treatment.

\* Dissert. de Trichosi. Frankf. 1724.

† Trichiasis admiranda, seu Morbus Pilaris, &c. Norib. 1658.



GEN. III.  
SPEC. V.  
γ P. incon-  
tinens  
atonica.  
Atonic in-  
continence  
of urine.

was derived from a similar plan : which is also in many instances equally adapted to the next variety.

In incontinence of urine from an atony of the sphincter of the bladder, the same means may be had recourse to, though with less hope of success.

Stoll recommends the use of an acetum armoracium, which, from combining a stimulant with a tonic and astringent power, may possibly be found serviceable, and is certainly worthy of trial\*. Small shocks of electricity passed from the pubes to the perinæum seem also to have succeeded in a few cases.

Means for  
preventing  
a dribbling  
of urine.

As the perpetual dribbling of the urine in this, and even the preceding variety, is always troublesome, and often produces excoriation, the patient will find it very convenient to be provided with a light urinary receptacle. This, for males, may consist of a small bag of oiled-silk worn as a glove for the penis, with a small piece of sponge placed in it as an absorbent. The simplest contrivance for females is a larger piece of soft sponge loosely attached to the pudendum.

δ P. incon-  
tinens  
aquosa.  
Flux of  
aqueous  
urine.

The FOURTH VARIETY, or flux of aqueous urine, is often a nervous affection, as in hysteria, or hypochondrias; but it more generally proceeds from a relaxation of the mouths of the cryptæ or tubuli uriniferi, which in consequence suffer a much larger quantity of fluid, and with too little elaboration, to pass through them than they should do.

In treating of paruria *mellita*, we observed that antecedently to the discovery of the singular secretion of sugar in the genuine form of this disease, the term diabetes, by which it was commonly expressed, imported any extraordinary or profuse flow of urine, whether watry or saccharine : whence the term was made to embrace at least two affections of the kidneys of very different kinds : as a simple relaxation of the mouths of the urinary tubules from debility ; and vehement excitement

\* Prælect. p. 287.

and a morbid change of action; the former expressed by diabetes *insipidus*, and the latter by *d. mellitus*. The variety we are now contemplating constitutes the first of these; as the second runs parallel with the preceding species. It is the *urina aquosa*\* of Galen which was also by himself, as well as the Greek writers in general, blended with the *urina mellita*, from their not having been acquainted with the difference of their constituent principles, and of the state of the kidneys in the one case and in the other; and hence both were equally described by them under the names of hyderus or water-flux, and hydrops matellæ or urinal-dropsy.

As this variety, like the preceding, is dependent on a debilitated state of the organ, it should be attacked with the same remedies, and particularly with astringent tonics and stimulants both local and general. Blisters applied to the loins will be found often useful, as may also tincture of cantharides in doses of from twenty drops to half a drachm or even a drachm. The warm and resinous balsams will moreover frequently afford aid, as turpentine and balsam of copaiva, or the essential oil of juniper.

The quantity discharged under this variety of the disease has occasionally been enormous: amounting to from thirty to forty pints a-day and sometimes more, for one, two or even three months without intermission; a variety of examples of which are offered in the volume of Nosology. Fonseca mentions a case of two hundred pints evacuated daily, but for what term of time is uncertain†.

GEN. III.  
SPEC. V.  
§ P. incontinens  
aquosa.  
Flux of aqueous urine.  
Often the diabetes insipidus of many writers: the *urina aquosa* of Galen:  
and hence a variety of his hyderus or hydrops matellæ.  
Medical treatment.

Quantity hereby discharged sometimes enormous.

\* De Crisibus, Lib. I. Cap. XII.

† De Naturæ Artisque Miraculis, p. 538.

## SPECIES VI.

## PARURIA INCOCTA.

## Unassimilated Urine.

URINE IMPREGNATED WITH FLUIDS TAKEN INTO THE  
STOMACH, AND EXCRETED WITHOUT CHANGE.

GEN. III.  
SPEC. VI.  
Parallel  
with some  
of the va-  
rieties of  
diabetes of  
the Greek  
writers.

THE Greek pathologists evidently allude to this morbid state of the urinary organs in comparing some varieties of their diabetes, or urinary diarrhœa, to a lientery or *lævitas intestinorum*, under which last the food is described by them as evacuated in a crude and undigested state, with very little alteration from the condition in which it was introduced into the stomach.

Nature of  
the disease  
explained.

The experiments of Sir Everard Home, and those of Dr. Wollaston, and Dr. Marcet, both contained in the Philosophical Transactions for the year 1811, show that rhubarb and prussiate of potash, may pass from the stomach into the bladder, without undergoing any decomposition; and, in these cases, apparently without taking the course of the blood-vessels. By what other path it is possible for them to have travelled is to this moment a subject of mere conjecture, upon which, however, the author has offered a few hints in the Physiological Proem to the present class. Oil of almonds has frequently reached the bladder with an equal destitution of change and has been discharged in the form of oil by the urethra\*: and oil of turpentine and juniper pass off in the same manner daily. Actuarius mentions a discharge of urine of a blue colour, in a boy who had taken a bitter

Further  
illustrated.

\* Bachotoni, Comment. Bonon. Tom. II. Part. I.

pill designed for another patient, but does not state the materials. Urine containing a sediment resembling Prussian blue was discharged copiously by a patient in a low fever about three days before his death: it afterwards became greenish, and possessed a strong ammoniacal smell. Another case is related by the same author of a discharge of blue urine in a woman of sixty without mischief. We do not know, however, that either of these two last cases was connected with any thing introduced into the stomach, and the blue or dark-coloured matter consisted probably of extravasated venous blood, intermixed with the yellow or other tinge of the urine.

GEN. III.  
SPEC. VI.  
Paruria  
incocta.  
Unassimilated urine.

Copious diluents, mucilaginous or farinaceous, will at all times afford the best means of deterging the kidneys of any such untempered materials as those we are now contemplating; and if the colour should appear to proceed from a rupture of blood-vessels in the same organs, the affection will become a variety of hæmaturia, and should be treated accordingly\*.

Medical  
treatment.

## SPECIES VII.

### PARURIA ERRATICA.

#### Erratic Urine.

##### URINE DISCHARGED AT SOME FOREIGN OUTLET.

UNDER the preceding species, we have seen that certain substances introduced into the stomach, will find their way unchanged to the kidneys. The present species presents to us a singularity of a different and almost opposite kind, by showing us that the urine itself, in a certain condition of the organ that secretes it, or of the

GEN. III.  
SPEC. VII.  
Nature of  
the species  
explained.

\* See Vol. II. p. 704.



GEN. III.  
SPEC. VII.  
Paruria  
erratica.  
Erratic  
urine.

system generally, may travel from the kidneys to other regions in a form equally unchanged. We know nothing of the means by which all this is accomplished, but we can sometimes avail ourselves of the fact itself, by employing a variety of medicines, which, in consequence of their being able, in this manner, to arrive at a definite organ without being decomposed in the general current of the blood, are supposed to have a specific influence upon such quarter, and have often been denominated specifics for such an effect; as cantharides in respect to the bladder, demulcents in respect to the lungs, and cinchona in respect to the irritable fibre.

Uroplania.

This disease has often been described under the name of uroplania, which is nothing more than a Greek compound for "erratic urine" as it is here denominated, but it has seldom been introduced into nosological arrangements. The cases, however, are so numerous and distinct, in writers of good authority, that it ought not to be rejected.

Mostly not  
a vicarious  
discharge  
but evacuation  
of  
genuine  
urine.

In most instances it is not a vicarious discharge; or, in other words, a secretion of a different kind compensating for a destitution of urine, but a discharge of an urinous fluid apparently absorbed after its secretion by the kidneys, and conveyed to the outlet from which it issues by a path or under a protection that has hitherto never been explained. We sometimes meet with it while there is a free secretion of urine by the kidneys, and a free passage by the bladder and urethra, in which case alone it can be called a disease. On other occasions we find it, as already observed under PARURIA *inops*, performing a remedial part, and travelling in the new direction to carry off recrementory matter that cannot be discharged at its proper outlet, nor retained in the blood without mischief.

Has been  
thrown off  
from the  
salivary  
glands,  
skin, navel,  
perinæum.

It has in different persons been evacuated by the salivary glands, the skin, at the navel, and by a fistulous opening into the perinæum.

The volume of Nosology gives a reference to cases and authorities illustrating each of these forms of discharge: and others are probably to be met with in other writings.

## GENUS IV.

## LITHIA.

## Urinary Calculus.

MORBID SECRETION OR ACCUMULATION OF CALCULOUS  
MATTER IN INTERNAL CAVITIES.

LITHIA is a Greek term from λίθος whence λιθιάω “calculo laboro.” It has often been written lithiasis, which is here exchanged for lithia, since *iasis*, in the present arrangement, is limited, as a termination, to words indicating diseases affecting the skin or cuticle, and that for reasons which will be explained presently.

GEN. IV.  
Origin of  
the generic  
term.

The name of lithus or lithiasis, as used by Aretæus and Aurelianus, and that of calculus or sabulum, as employed by Celsus and Pliny, sufficiently evince the elementary principles of which the Greeks and Romans conceived urinary calculi to consist. The mistake is not to be wondered at when we reflect, that it is not till about thirty years ago that these principles were detected with any degree of accuracy; and that we are indebted to the minute and elaborate experiments of Fourcroy and Vauguelin for an analysis that till their time, though successively pursued by Hales, Boyle, Boerhaave, and Slare, had been left in a very unsatisfactory state; and which even since this period has required the further corrections of Wollaston, Marcet, Cruikshank, Berzelius, Brande, and various other animal chemists to produce all the success we could desire. So generally was the belief that the calculi of the bladder were formed in the same manner and consisted of the same materials as

Synonymous with  
lithus and  
lithiasis.

Subject  
little known  
by chemical  
analysis till of  
late years.

GEN. IV.  
Lithia.  
Urinary  
calculus.

the stones of the mineral kingdom, that Dr. Shirley published a learned book as late as 1671, which is now become extremely scarce, entitled "Of the causes of stones in the greater world in order to find out the causes and cure of the stones in man."

Compound  
principles  
of urine.

The urinary secretion in a state of health is one of the most compound fluids of the animal system : and consists of various acids, and alkalies, the former, however, bearing a preponderancy, with a certain proportion of calcareous earth, and other materials which it is not necessary to dwell upon at present. The acid first discovered in it was the phosphoric, which was traced by Brandt and Kunckel, whence the experiments of Boyle from which he obtained phosphorus. The important discovery of uric acid was reserved for Scheele, who detected it in 1776 : as he did also benzoic acid, chiefly confined to the urine of children. Proust has since proved that it contains also carbonic acid, and a peculiar resin like that of bile; and other acids, in smaller proportion, have more lately been ascertained by Thenard and Berzelius. Hence the calcareous earth that is separated by the kidneys, as we have had occasion to observe that it is also by most other organs of the body in a state of health or of disease, is productive of numerous compounds, as carbonate of lime, phosphate of lime, oxalate of lime : together with compounds still more complicated by an intermixture of the lime with the urinary alkalies. But as, in a state of health, the urine is always found to contain calcareous earth under some form or other, in a morbid state it is also found to contain magnesian earth more or less united with the other materials, both acid and alkaline. In many cases moreover, the natural acids, or the natural alkalies are secreted in excess, in others in deficiency. And from all these circumstances it is easy to conceive that a very great variety of concretions, or calculi may at times take place either in the kidneys or in the bladder. How far these varieties extend, has, perhaps, not fully been determined to the present day, but the number which has been detected and analyzed is now very considerable and has

Phosphoric  
acid by  
whom first  
discovered.

Uric acid  
when first  
discovered.

Carbonic  
acid, resin,  
and other  
substances.  
Hence the  
calcareous  
earth of the  
kidneys  
productive  
of nume-  
rous com-  
pounds.

Magnesian  
earth an  
occasional  
ingredient.  
Many of  
these prin-  
ciples se-  
creted in  
excess or in  
deficiency.  
Hence the  
varieties of  
calculi  
almost in-  
numerable.

been increasing ever since Dr. Wollaston's valuable essay on this subject, which appeared in the Philosophical Transactions for the year 1797, and laid a foundation for the arrangement. Among those which have been subsequently ascertained, a few, and especially the cystic oxyde, have been discovered by himself; and the whole are thus enumerated by Dr. Marcet in a still later production of highly distinguished merit \*. 1. *Lithic* calculus, composed chiefly of lithic or uric acid. 2. *Earth-bone* calculus, consisting chiefly of phosphate of lime. 3. *Ammoniaco-magnesian phosphate* or calculus, in which this triple salt obviously prevails. 4. *Fusible* calculus, consisting of a mixture of the two former. 5. *Mulberry* calculus, or oxalate of lime. 6. *Cystic* calculus, consisting of the substance called by Dr. Wollaston cystic oxyde. 7. *Alternating* calculus, or a concretion composed of two or more different species arranged in alternate layers. 8. *Compound* calculus, the ingredients of which are so intimately mixed as not to be separable without chemical analysis. 9. Calculus from the *prostate gland*, of a peculiar kind, and consisting, according to Dr. Wollaston, "of phosphate of lime not distinctly stratified, and tinged by the secretion of the prostate gland." The two not hitherto described are. 10. *Xanthic oxyd*, making an approach to the cystic calculus, but giving, which that does not, a bright lemon residuum on evaporating its nitric solution. And 11. *Fibrinous* calculus, so called from its possessing properties exactly similar to those of the fibrina of the blood, and no doubt formed by a deposit from this fluid.

Of these a few only are commonly found in the kidneys, though most of those which are found in the kidneys are found also in the bladder, and in reality constitute the common nuclei of the calculous concretions of this last organ; the augmentation resulting from other

## GEN. IV.

Lithia.  
Urinary  
calculus.

Arrange-  
ment at-  
tempted by  
Wollaston.

And pur-  
sued by  
Marcet, who  
enumerates  
them as  
follows.

Of these,  
few only  
found in the  
kidneys,  
and many  
of them not  
often in the  
bladder.

---

\* Essay on the Chemical History and Medical Treatment of Calculous Disorders.



GEN. IV.  
Lithia.  
Urinary  
calculus.

constituent principles of the urine, gradually separating, and encrusting them as they lie in the bladder in an undisturbed state.

The symptoms, moreover, of renal and vesical calculi differ as widely as their component parts, and hence point out the necessity of subdividing the genus into the two following species :

- |                    |                   |
|--------------------|-------------------|
| 1. LITHIA RENALIS. | RENAL CALCULUS.   |
| 2. ——— VESICALIS.  | VESICAL CALCULUS. |

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### SPECIES I.

## LITHIA RENALIS.

### Renal Calculus.

PAIN IN THE LOINS, SHOOTING DOWN TOWARDS THE TESTES OR THIGHS, INCREASED ON EXERCISE ; URINE OFTEN DEPOSITING A SABULOUS SEDIMENT.

GEN. IV.  
SPEC. II.  
Nature of  
the species  
explained.

THE calculous matter of the kidneys sometimes passes off in minute and imperceptible grains with the urine, which are only noticed by their concreting or crystallizing about the sides of the vessel that receives it ; and sometimes collects and forms very troublesome spherules or nodules in the substance or pelvis of the kidneys : thus offering the two following varieties :

$\alpha$  Arenosa.  
Urinary sand.

Pain slight, and unfrequent:  
free discharge of sabulous granules.

6 Calculosa.

Urinary gravel.

Pain mostly severe and constant: sabulous discharge small and seldom or never: calculus varying in size, often large and obstructing the pelvis or ureter of the kidney.

GEN. IV.

SPEC. I.

Lithia renalis.

Renal calculus.

Urinary sand, or the sabulous matter deposited on the sides or bottom of a receiving vessel, is of two kinds, WHITE and RED: and it is of great importance to distinguish the one from the other as they proceed from very different causes, and require a different, and, indeed, opposite mode of treatment. Mr. Brande has published an excellent treatise upon this subject in his Quarterly Journal; and in the remarks about to be offered upon this species, I shall avail myself in no small degree of the benefit of his labours in connexion with those of Dr. Marcet to which I have already referred.

The urine, in a healthy state, is always an acid secretion, and it is the excess of its acid that holds the earthy salts in solution. If, from any cause, it be deprived of this excess, or, in other words, the secretion of its acid be morbidly diminished, the earthy parts are no longer held in solution, and a tendency to form a WHITE SAND OR CALCAREOUS DEPOSITE immediately commences. And that this is the real source of its production is manifest from the simple experiment of mixing a little alkali with recently voided urine; for the alkali has no sooner exercised its affinity for the acid than the urine throws down a white powder. And hence a like deposite will not unfrequently take place upon using magnesia too freely.

A knowledge of the cause of this modification of urinary sand puts us at once into an easy mode of curing it, a mode however which was first pointed out to the world by Dr. Wollaston. It consists in introducing into the system some other acid as a substitute for that which is wanting to the kidneys. All the acids seem to

α L. renalis

arenosa.

Urinary sand;

of two sorts white and red.

White urinary sand.

Healthy urine always contains an excess of acid, which is the uric, and holds the earthy salts in solution.

If this be diminished the earthy parts separate and become deposited in the form of white urinary sand.

Illustrated.

Easy mode of curing this evil.

Substitution of some other acid.

GEN. IV.  
SPEC. I.  
α L. renalis  
arenosa.  
Urinary  
sand.  
All acids  
will answer.

answer this purpose, but as the sulphuric usually sits easier on the stomach than any other of the mineral acids it is entitled to a preference; and the more so on account of its superior tonic powers, and consequently its better adaptation to the chylofactive organs, a debility which is no unfrequent cause of the complaint. The vegetable acids, nevertheless, may be interposed with the sulphuric, or, where the stomach is very delicate, entirely supersede their use. Of these the citric is the pleasantest and can be persevered in for the longest period of time, especially in the case of children. The tartaric, however, and especially in the form of creme of tartar, has the advantage of gently operating upon the bowels which is always a beneficial effect. Carbonic acid whether taken in the form of effervescing saline draughts, or simply dissolved in water by means of Nooth's apparatus will also be found a useful and pleasant auxiliary. The general diet should be of the same description, and be as largely as possible intermixed with salads, acids, fruits, and especially oranges. Malt liquor should be abstained from; and, if the habit of the patient require that he should continue the use of wine, Champagne or claret should be preferred to Madeira or port.

Carbonic  
acid-

Acescent  
diet.

If too large  
a secretion  
of calcareous  
earth  
the result  
alike.

It is possible, however that this modification may be a result of too large a secretion of calcareous earth, instead of too small a secretion of acid; yet the effect being the same the same mode of treatment will be advisable.

This acid  
may be in  
excess in-  
stead of de-  
ficiency;

But the acid may be in excess instead of in deficiency, or, which is nearly the same thing, the natural secretion, of calcareous earth may itself be deficient while the acid retains its usual measure: and in this case the acid itself has a tendency to form a deposit by crystallizing into minute and red spiculæ,—and hence the modification of RED SAND that is so frequently found coating the sides and bottom of chamber-utensils.

Red uri-  
nary sand,  
a result of  
this.

Voided in  
two ways.

This, like the preceding, is sometimes voided in a concrete or crystallized state, or the urine may be voided clear, and the deposit not take place till some hours

afterwards. The last is ordinarily the result of some temporary cause, and is of no importance as it disappears with the cause that produces it. The first is of more serious consideration as it indicates a lithic diathesis that may lead to a formation of large and mischievous calculi, and is a pretty certain harbinger of the variety we shall have to notice under the name of gravel.

As acids form the best preventive and cure in the preceding case, alkalies present an equal, or nearly equal remedy in the present, with the exception that the tendency to produce urinary red sand is more likely to run into a habit, and is hence less easily extirpated, than that to produce white.

It has, in fact, been long known that concrete uric acid is soluble in the caustic fixed alkalies, and these were, in consequence hereof, the earliest forms of alkali adverted to for this deposit. But it has since been ascertained that the alkaline carbonates and sub-carbonates are equally effectual. And, as the latter are far less apt to disagree with the stomach than the former, they have very generally taken their place. Of the alkalies and alkaline carbonates soda has commonly been found to answer the purpose best. It is, indeed, chiefly effectual in its pure state, but it is most convenient to use it in a milder form; and of all the forms it offers that of soda-water is the pleasantest, and may be persevered in for the longest period of time. Nevertheless there are some constitutions in which potash and its carbonate prove more effectual than soda, a remark for which we are indebted to Sir Gilbert Blane, who, on this account, has occasionally given it the preference, and for the sake of rendering it more palatable has sometimes partly saturated it with lemon-juice or citric acid; and where there has been severe or protracted pain, producing considerable irritation, has united it with opium\*. A drachm of the carbonate of either of the fixed alkalies will form a mo-

GEN. IV.  
SPEC. I.  
α *L. renalis*  
*arenosa*.  
Urinary  
sand.

This modification relieved by alkalies.

The effect of caustic fixed alkalies upon concrete uric acid long known. Now known that alkaline carbonates are as effectual. Soda.

Sometimes with an under dose of citric acid, or opium.

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\* Transactions of a Society for improving Medical and Chirurgical Knowledge, Vol. III. p. 358.



GEN. IV.  
SPEC. I.  
α L. renalis  
arenosa.  
Urinary  
sand.

derate dose for an adult, and may be repeated two or three times a-day, taken during the effervescence produced by the addition of half an ounce of lemon-juice to the menstruum, which may consist of two ounces of water sweetened with honey.

Ammonia  
and its sub-  
carbonate.

Ammonia and its sub-carbonate have been had recourse to, and with great advantage, where symptoms of indigestion have been brought on by the fixed alkalies; and particularly in cases in which red gravel is connected with gout, and the two diseases show a disposition to alternate.

Magnesia.

Magnesia is also of considerable use, as has been lately shown by Mr. Brande in two excellent papers upon this subject, published in the Philosophical Transactions \*. Taken in free and frequent doses it has often succeeded in checking the tendency to a formation of sand and gravel, and has kept many individuals free from this complaint for very long periods of time who have been constitutionally predisposed to it. Nevertheless it is not calculated to supersede the use of the alkalies, but may be employed as a convenient adjunct, or supply their place for a time, when the patient has become tired of using them.

Whether  
the acids  
and alkalies  
act indi-  
rectly by  
influencing  
the sto-  
mach, &c.,  
or direct-  
ly by pass-  
ing to the  
bladder.

There is some doubt as to the manner in which the acids employed to correct a secretion of white sand, and the alkalies that of red, fulfil their object: whether indirectly by a peculiar action on the chylofacient organs so as to render the fresh supply of nutriment more easily disposed to yield an acid in the one case, and less easily in the other; or directly by passing unchanged along the current of the blood and arriving at the kidneys in their proper forms. There is a difficulty in attending both these views; but as uric acid, though soluble in the caustic alkalies, is found not to be soluble in their carbonates and sub-carbonates, the benefit of alkaline medicines does not seem referable to their solvent powers.

But alka-  
line carbo-  
nates are no  
solvent  
uric acid:

\* Phil. Trans. Year 1810, p. 136; 1813, p. 213.

And hence it is, on the whole, more probable that both acids and alkalies produce an indirect influence on the kidneys, as we have already had occasion to observe that animal food does in saccharine urine, by a peculiar influence on the chylofacient viscera, or the nutritive materials during their subaction.

There is also another class of medicines which have long stood the test, and been proved to possess a truly remedial power in all urinary concretions of the kind before us—I mean astringents. So considerable is their efficacy that De Heucher ascribes to them an expulsoy power, in his treatise entitled “*Calculus per astringentia pellendus*.” Their real mode of action has probably been pointed out by Dr. Cullen in a passage in which he has anticipated much of the reasoning of the present day concerning the benefit of alkalies, and has hereby given an additional proof of the strength of his judgement. Speaking of the leaves of the *uva ursi*, he says, that this medicine, “Not only from the experiments of the late De Haen, but also from my own, I have found to be often powerful in relieving the symptoms of calculus. This plant is manifestly a powerful astringent: and in what manner this and other astringents are useful in the cases mentioned may be difficult to explain: but I shall offer a conjecture upon the subject. Their powerful attraction of acid we have mentioned above, and that thereby they may be useful in calculous cases is rendered probable by this, that the medicines which of late have been found the most powerful in relieving the symptoms of calculus are a variety of alkalies, which are known to do this without their acting at all in dissolving the stone\*.” The virtue as a stomachic tonic ought also to be taken into consideration as well as their absorbent power.

THE SECOND VARIETY of the lithic concretion we are now contemplating, and which, from its tendency to

GEN. IV.  
SPEC. I.  
α *L. renalis arenosa*.  
Urinary sand.  
and hence the probable action is an indirect influence.  
Beneficial use of astringents.  
Supposed by De Heucher to possess an expulsoy power: probable mode of action, as pointed out by Cullen.

β *L. renalis calculosa*.  
Urinary gravel.

\* Mat., Med. Part. II. Chap. I. p. 15.

GEN IV.  
SPEC. J.  
6 L. renalis  
calculosa.  
Urinary  
gravel.

Only three  
of Marcet's  
classifica-  
tion of cal-  
culi ever  
found in  
the kidneys,  
uric, oxalic,  
and cystic.

Uric cal-  
culi, their  
chemical  
character.

form larger masses is usually denominated GRAVEL, is of far greater importance than the preceding, from the actual pain that is suffered in most cases, and the danger there always exists of the conversion of such nodules into calculi of the bladder.

Of the eleven classes of urinary calculi enumerated by Dr. Marcet, there are rarely more than three that are found passing through the natural passages of the kidneys, though others are traced occasionally as imbedded in the pelvis or substance of the kidneys. These three are the uric, oxalic, and cystic: and of these the two last are very rare productions in comparison with the first. "Out of fifty-eight cases of kidney calculi," says Mr. Brande, "fifty-one were uric, six oxalic, and one cystic." The phosphates seem never to concrete so as to form calculi in the kidneys, for which it seems difficult to assign a reason.

The uric calculi as voided immediately from the kidneys, are of a yellowish or reddish-brown colour, somewhat hard, and soluble in caustic potash. They exhale the smell of burnt horn before the blow-pipe, and, when heated with nitric acid, produce the peculiar red compound which Dr. Prout has called rosacic acid. The oxalic calculi vary considerably in appearance. They are generally of a grayish-brown colour, and made up of numerous small cohering spherules, and have sometimes a polished surface and resemble hempseeds. They are easily recognised by their insolubility in dilute muriatic acid: and by swelling up under the blow-pipe, and burning into a white ash consisting of pure lime. The cystic calculi have a yellowish colour, and a crystallized appearance; they are soluble in dilute muriatic acid, and in diluted solution of potash. Dr. Wollaston has remarked that when heated in the flame of a spirit-lamp, or by the blow-pipe, they exhale a peculiar fetid smell by which they may readily be characterized\*.

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\* Brande, Journal, &c. Vol. VIII. p. 67.

The usual symptoms by which this variety is marked are those of pressure and irritation: as a fixed pain in region of the affected kidney, with a numbness of the thigh on the same side, the pain alternating with a sense of weight. The pain is sometimes very acute and accompanied with nausea and delirium, proving that the calculus has entered the ureter, and is working its way down into the bladder, after which the pain ceases till it reaches the urethra, or, by remaining in the bladder, it becomes encrusted with other materials, and forms a vesicular calculus. During the whole of the passage from the kidneys the urine is usually high-coloured, and deposits a reddish or reddish-brown sediment, occasionally not unlike the grounds of coffee, and evidently giving proof of the laceration of blood-vessels by the angular points of the calculus. It is a very singular fact, and has been properly noticed by Dr. Heberden, that during the most violent pain at any time endured from this cause there is rarely any acceleration of the pulse: in the same manner as the torture sustained by the passage of a gall-stone through the gall-ducts produces a little effect upon it. If, however, the flow of the urine be obstructed by the calculus, as sometimes happens, the ordinary constitutional symptoms take place which characterize that affection, as a general sense of uneasiness, heat, thirst, a quickened pulse, and other pyretic concomitants: sickness at the stomach, costiveness, sleepless nights, and at length coma, intermitting pulse, convulsions, and death: and all this even where the pain or weight in the loins is not peculiarly distressing.

We have often had occasion to observe that where a morbid change takes place in an organ very gradually it may proceed to almost any extent without any acute suffering on the part of the patient, and sometimes without any suffering whatever. The same fact not unfrequently occurs in the disease before us, of which a remarkable instance is related by Dr. Marcet, in a patient who died of a dropsy in the chest, without having made any complaint of the state of his urinary organs, though

## GEN. IV.

## SPEC. I.

6 L. renalis  
calculosa.  
Urinary  
gravel.

Symptoms  
by which  
this variety  
is marked.

Where the  
disease pro-  
ceeds very  
slowly little  
inconveni-  
ence felt in  
many cases.

Illustrated.



GEN. IV.

SPEC. I.

C L. renalis

calculosa.

Urinary

gravel.

Proximate

cause of

uric calculi,

uric acid.

That of ox-

alic and

cystic not

so obvious.

Predispo-

sing and

occasional

causes.

Process of  
treatment.

one of his kidneys was found, on dissection, to be distended by a large collection of calculi.

The proximate cause of the formation of uric calculi we have already shown to be an excess of uric acid; that of the oxalic and cystic is not quite so obvious,—a point however, of less importance from the infrequency of their occurrence. The predisposing and occasional causes of all of them are too often involved in obscurity. In many persons there is an hereditary tendency to this complaint; general indolence or a sedentary life becomes a predisponent in others; too large an indulgence in fermented liquors, and the luxuries of the table generally, forms a predisponent in a third class; but the chief cause of this kind we are acquainted with is a want of constitutional vigour, and especially in the digestive organs; and hence the periods of life in which this disease occurs most frequently are from infancy to the age of puberty, and in declining years: while it is rarely found during the busy and restless term of mature virility.

The process of treatment must, for the most part, be derived from these causes. As a preventive of that modification of calculus which is by far the most frequent, we have already advised the use of alkalies and alkaline carbonates. Where the digestive organs are weak the diet should be light but generous; warm and bitter tonics will always be found serviceable; the bowels should never be suffered to become costive, and should occasionally be stimulated by brisk purgatives, which tend equally to remove acidities from the stomach, and to stimulate the kidneys to a more healthy action. Indolence and a sedative life must give way to exercise, and especially equitation, which is by far the best kind of exercise for the present purpose, and whatever will tend to promote an increased determination towards the surface, and a frequent glow on the skin will prove a valuable auxiliary: for the skin itself becomes, in this affection, though rarely in paruria *mellita*, an outlet for the discharge of a redundancy of acid, as may be observed by the simple experiment of tying a piece of

paper stained with litmus about the neck; which even in a state of common health, will often be changed to a red colour by the acid thrown off in the ordinary course of perspiration.

Of the mischievous effects of a luxurious diet, and the advantage of abstinence M. Magendie has given a very striking example in the case of a merchant of one of the Hanseatic towns who was habitually afflicted with the complaint before us. "In the year 1814 this gentleman," he tells us, "was possessed of a considerable fortune, lived in an appropriate style, and kept a very good table, of which he himself made no very sparing use. He was at this time troubled with the gravel. Some political measure unexpectedly took place which caused him the loss of his whole fortune, and obliged him to take refuge in England, where he passed nearly a year in a state bordering upon extreme distress, which obliged him to submit to numberless privations; but his gravel disappeared. By degrees he succeeded in re-establishing his affairs; he resumed his old habits, and the gravel very shortly began to return. A second reverse occasioned him once more the loss of all he had acquired. He went to France almost without the means of subsistence, when his diet being in proportion to his exhausted resources, the gravel again a second time vanished. Again his industry restored him to comfortable circumstances; again he indulged in the pleasures of the table, and had to pay the tax of his old complaint\*."

It may at first sight appear a singular fact, but the remarks just offered will tend to explain it, that mariners are rarely subject to stone or gravel. Mr. Hutchison has published a valuable article upon this subject in one of the volumes of the *Medico-Chirurgical Transactions*†, from which it appears that out of ninety-six thousand six

GEN. IV.  
SPEC. I.  
Lithia  
renalis.  
Renal  
calculus.  
Treatment.  
Mischiev-  
ous effects  
of a luxu-  
rious diet  
exemplified  
from Ma-  
gendie.

Mariners  
rarely sub-  
ject to this  
disease.  
Explained.

\* *Recherches Physiologiques et Medicales sur les Causes, les Sympômes et la Traitement de la Gravelle.* 8vo. Paris, 1818.

† *Trans. of the Medico-Chirurg. Soc. Vol. ix.*

GEN. IV.  
SPEC. I.  
Lithia  
renalis.  
Renal cal-  
culus.  
Treatment.

hundred and ninety-seven patients admitted in the course of sixteen years into the three grand coast hospitals of Plymouth, Haslar, and Deal, not more than eight had laboured under either species of lithia. Whence it appears that the occupation, diet, activity, and regimen of a maritime life are the best preservatives against all such affections : such as an animal aliment largely combined with the alkaline stimulus of muriate of soda ; a farinaceous, for the most part, instead of any other vegetable diet ; great exercise, and that free exhalation from the skin at night which is so well known to take place among sailors in the royal navy, in consequence of their being compelled to sleep closely together. And, as the disease appears to be equally uncommon in tropical climates, we have here an easy explanation of the cause of its infrequency. In our own country it appears from the tables of the Norwich hospital to be more frequent in Norfolk than in any other county of the same population.

Remedial  
process  
during the  
paroxysm  
of pain.

It only remains to be observed that during the paroxysm of pain produced by the passage of a calculus through the ureter, our chief object should be to allay the irritation and mitigate the distress. The warm-bath is here a very valuable remedy, friction on the loins with rubefacient irritants combined with narcotics often afford relief : but the present author has found most benefit from a flannel-swathe wrung out in hot water and folded about the loins ; being suffered to remain there for hours, wrapped round, to confine the moisture, with an outer swathe of calico or linen. If these do not answer, opium, and in free doses, must be had recourse to.

## SPECIES II.

## LITHIA VESICALIS.

## Stone in the Bladder.

FREQUENT DESIRE OF MAKING WATER, WITH A DIFFICULTY OF DISCHARGE; PENIS RIGID, WITH ACUTE PAIN AT THE GLANS: SONOROUS RESISTANCE TO THE SOUND WHEN SEARCHING THE BLADDER.

THE substances, vulgarly called stones in the bladder, are, for the most part, of a very composite structure. They originate from a nucleus which may consist of any morbid or foreign material that can accidentally obtain an entrance and a lodgement in the bladder; the body of the calculus being formed out of such constituent parts of the urine as are most easily detached and attracted: which gradually encrust around it, and concrete into a mass for the most part far too large to pass through the urethra.

The most common of these nuclei is a kidney-calculus itself, and consequently a crystallized spherule or nodule of uric acid; and, where the acid is habitually in excess, the coating of the vesicular calculus may consist of this alone or chiefly: but, from the great variety of materials, as earths, alkalies, and other acids besides uric, and sometimes blood and mucus, which enter into the composition of the urine at this time, it is not often that a calculus of the bladder is a crystallization of uric acid alone.

In the introductory remarks upon the present genus, we observed that the different kinds of calculi discovered in the human bladder had been treated of by Dr. Wollaston, as far as they were then known, in a very mas-

GEN. IV.  
SPEC. II.

Vesical stones of a very composite structure: consisting of different nuclei surrounded with an endless variety of materials.

Kidney-calculus the most common nucleus: and sometimes comprises the entire stone

Materials chiefly found arranged by Wollaston into five divisions.



GEN. IV.  
SPEC. II.  
Lithia  
vesicalis.  
Stone in the  
bladder.

terly essay upon this subject, published in the Philosophical Transactions for the year 1797: he has since enumerated them as follows:

1. Uric acid calculus.
2. Fusible, triple, or ammonio-magnesian phosphate.
3. Bone-earth calculus, or phosphate of lime.
4. Mulberry calculus, or oxalate of lime.
5. Cystic oxyde.

The cystic oxyde is not contained in the article above referred to, as not having been discovered at the time: but it has since been detected by the same excellent chemist, and named as above.

Other materials  
sometimes  
traced:

We have also observed that various other calculous masses have still more lately been ascertained by the analyses of other experimenters, and that the whole number, as arranged by Dr. Marcet, amounts, in the present day, to eleven or twelve. Their names we have already given, nor is it worth while, in a work devoted to practical medicine, to notice them any further, as they are rarely to be met with in comparison with the five arranged above, and when met with will not call for any essential difference in the mode of treatment.

Hence calculi of all  
forms, sizes,  
and colours.  
Sometimes  
covered with  
down:

In effect, they have been found equally different in composition, form, size, and colour; from the weight of half a drachm to that of several pounds; purple, jasper-hued, red, brown, crystalline, cineritious, versicoloured: in one or two instances covered with down\*, apparently produced from the surface of the bladder, from which, as we have already had to observe, hairs are occasionally discharged with the urine†. They have also been found solid, perforated, hollow, compact, crumbling, glabrous, rough, and spinous‡, and, in a few instances, combined with iron§.

Sometimes  
intermixed  
with iron.

\* Blegny, Zodiac. Ann. iv. Febr. Obs. 4.

† Gen. III. Spec. v. part. in cont.

‡ Bartholin. Act. Hafn. Tom. II. Obs. 85.

§ Act. Erudit. Leips. 1627. p. 332.

Dotæus, Ep. ad Waldschmidt. p. 253.

They seem sometimes to form very rapidly; and, where the patient has already discharged one or two, and the urethra has in consequence become more than ordinarily dilated, they occasionally pass off in great numbers in a short space of time. We have hence, in different professional journals and transactions, accounts of a hundred and twenty voided in the course of three days \*; two thousand in the course of two years †; and three hundred of a pretty large size within the same term ‡. The largest discharged in this manner, which has ever occurred to me in reading, weighed five ounces. Dr. Huxham describes one instance of such a fact §; and another is given in a distinguished foreign miscellany ||. By females they have often been discharged of the weight of two ounces and a half; and my excellent friend Dr. Yellowly mentions a calculus of nearly three ounces and a half ¶; in one case we are told of a stone thus evacuated that weighed twelve ounces \*\*.

The general character of the URIC CALCULUS has been given already. Its texture when formed in the bladder is commonly laminated; and, when cut into halves, a distinct nucleus of uric acid is almost always perceptible. Its exterior is generally smoother than that of other calculi, except the calculus of bone-earth, or phosphate of lime ††.

The appearance of the second or FUSIBLE CALCULUS is generally white, and often resembles chalk in its texture. Strongly heated before the blow-pipe this substance evolves ammonia, and readily fuses; whence the name assigned to it. It often breaks into layers, and exhibits a glittering appearance when broken.

GEN. IV.  
SPEC. II.  
Lithia  
vesicalis.  
Stone in the  
Bladder.  
Are some-  
times pro-  
duced very  
rapidly, and  
discharged  
in great  
numbers.  
Exempli-  
fied.

Chemical  
character  
of uric cal-  
culus.

Chemical  
character  
of fusible  
calculus.

\* Eph. Nat. Cur. Dec. III. Ann. v. vi. p. 99.

† Gründlicher Bericht, von Blatterstein.

‡ Hildan. Fabric. Cent. I. Obs. 89.

§ Huxh. Vol. III. p. 42.

|| Sammlung. Med. Wahrnehmung. Band. VIII. p. 258.

¶ Trans. of the Medico-Chir. Soc. Vol. VI.

\*\* Eph. Nat. Cur. Dec. II. Ann. v. Obs. 71.

†† Brande's Journal, Vol. VIII. p. 207.

GEN. IV.  
SPEC. II.  
Lithia  
vesicalis.  
Stone in the  
bladder.  
Chemical  
character  
of bone-  
earth cal-  
culus.  
Chemical  
character  
of mulberry  
calculus.

Chemical  
character  
of cystic  
calculus.

Formation  
of the body  
of a calcu-  
lus illustra-  
ted.

Ordinary  
causes of  
renal cal-  
culi those  
of vesical:  
but other  
causes ex-  
ist depend-  
ent upon the  
state of the  
bladder.

The third division, consisting of the BONE-EARTH CALCULUS, or phosphate of lime unmixed with any other substance, has a pale brown, smooth surface; and when sawn through is found of a laminated texture, and easily separates into concentric crusts. This calculus is peculiarly difficult of fusion.

The fourth division embracing the MULBERRY CALCULUS, or oxalate of lime, is of a rough and tuberculated exterior, and of a deep reddish-brown or mulberry colour, probably produced by a mixture of blood that has escaped from some lacerated vessel, whence the name assigned to it. The nucleus is generally oxalic, and of renal origin; but it is sometimes uric. It is also frequently enveloped by the fusible calculus.

The fifth, or CYSTIC CALCULUS has a crystalline appearance but of a peculiar greasy lustre, and is somewhat tough when cut. Its colour is a pale fawn bordering upon straw-yellow. It is very rarely to be met with.

Such are the calculi which are principally found in the bladder; and we may readily conceive with what facility they are formed there, when an accidental tendency is given to their formation by a lodgement of any thing that may serve as a nucleus, by noticing the deposits of phosphates of lime and other materials that are perpetually encrusting every substance over which a current of urine is frequently passing; as the public drains in our streets, which are daily exhibiting them in regular crystals.

The ordinary causes of renal calculi are necessarily those of vesical calculi, but any local injury or infirmity, which prevents the urine from passing off freely from the bladder, accelerates their formation and enlargement, not only by the confinement it causes but by the decomposition which rest soon produces, in which case it becomes ammoniacal, and a larger portion of the phosphates will be precipitated. And hence, an obstruction in the urethra of any kind, but particularly a diseased prostate becomes a frequent auxiliary, and sometimes even a primary cause of the formation of a stone without

any mischief in the kidneys, or any disordered secretion of urine \*. “The bladder,” says Sir Everard Home, “never being completely emptied, the dregs of the urine, if I may be allowed the expression, being never evacuated, a calculus formed on a nucleus of the ammoniaco-magnesian phosphate and mucus is produced, when it would not have been produced under other circumstances. This species of stone, or a stone upon such a nucleus, can only be produced where the bladder is unable to empty itself. It may therefore be arranged among the consequences of the enlargement of the middle lobe of the prostate gland †.”

It does not appear from the experiments or observations of Dr. Marcet, that a difference in the waters of different places is much, if at all, concerned in the production of calculous disorders: nor have we any satisfactory evidence of their being more prevalent in cider than in other countries, notwithstanding the general opinion that they are so. But we are yet in want of sufficient data upon this subject to speak with much decision.

As the disease of stone in the bladder is very generally a sequel of calculi in the kidneys, the symptoms indicative of the preceding species form, in most instances, the first symptoms of the present. Yet occasionally, from causes we have just pointed out, the concretion commences in the bladder, and the symptoms of an affected kidney are not experienced. One of the first signs of a stone in the bladder is an uneasy sensation at the point of the urethra occurring in conjunction with a discharge of urine that deposits red or white sand, or after having occasionally voided small calculi or fragments of a larger. This pain is sympathetic, and proceeds from the irritation of the prostate or the neck of the bladder, agreeably to a law of nature we have

GEN. IV.  
SPEC. II.  
Lithia  
vesicalis.  
Stone in the  
bladder.

Difference  
of waters in  
different  
places do  
not seem to  
be a cause.

Symptoms  
of renal  
calculi the  
harbingers  
of vesical.

Progress of  
the disease.  
Pain at the  
point of the  
urethra.  
Cause  
explained.

\* Brande's Journal, &c. Vol. VIII. p. 210.

† On the Diseases of the Prostate Gland, Vol. I. p. 40.



GEN. IV.  
SPEC. II.  
Lithia  
vesicalis.  
Stone in the  
bladder.

Urine void-  
ed in drops,  
or inter-  
ruptedly

Tenesmus.  
Urine some-  
times lim-  
pid:

sometimes  
turbid.

How distin-  
guishable  
from a pri-  
mary dis-  
ease of the  
prostate  
gland.

Stone not  
always dis-  
coverable  
by the  
sound.

often found it necessary to recur to, which ordains that the extremities of nerves which enter into the fabric of an organ, and particularly of mucous canals, should possess a keener reciprocity of feeling than any intermediate part, and consequently participate with more acuteness in any diseased action. This uneasy sensation at the point of the urethra, is at first only perceived on using any violent or jolting exercise; or in a frequent desire to make water, which is often voided by drops or in small quantities, or, if in a stream, the current stops suddenly while the patient is still conscious that the bladder is not fully emptied, and has still an inclination to evacuate more, but without a power of doing so. As the stone increases in size there is also a dull pain about the neck of the bladder, the rectum partakes of the irritation, and produces a troublesome tenesmus, or frequent desire to go to stool. Where the pain is trifling the urine is often limpid, as the saline or earthy materials from their confinement in the bladder arrange themselves around the growing calculus, and enlarge it by a new coating; but where the irritation is considerable, there is often a mucous sediment in the water, and sometimes a discolouration from blood. The region of uneasiness extends its boundary, the stomach participates in the disquiet, sleepless nights ensue, with pyrexia, anxiety, and dejection of spirits: all which symptoms are increased by exercise of every kind and particularly by equitation. Several of these signs may indicate a primary disease of the prostate or neck of the bladder, but the occasional discharge of calculous fragments or deposit of urine loaded with uric acid or phosphate of lime, are sufficiently pathognomic. It is usual, however, in all such cases, to examine the bladder by a sound, which commonly puts the question beyond all dispute: though if the calculus be lodged in a peculiar sac or the fasciculi of the bladder, or lurk behind some morbid enlargement of the prostate gland, the sound may not detect it, and the experimenter may deceive himself and the patient in respect to the nature of the disease,

The treatment of this disease offers two indications, a palliative and a radical.

The palliative may be applied to relieve the actual symptoms, and to prevent a further enlargement of the calculus.

The symptoms vary greatly in different cases: partly, indeed, from the size of the calculus itself, but quite as much from the constitutional irritability of the bladder and the particular quarter of it in which it is seated. In a few persons, the bladder has possessed so little morbid excitement that stones of considerable magnitude have been found in this organ after death without having produced any very serious inconvenience during life. If the calculus be immediately seated on the neck of the bladder it is, however, almost impossible for the most impassive not to suffer severely at times. But the stone has sometimes found a fortunate lodgement between the muscular fascicles of the bladder, where it has become imbedded as in a pouch, and a train of morbid symptoms, which have antecedently shown themselves, have gradually disappeared in proportion as this change has been effected.

Mr. Nourse showed to the Royal Society the bladder of a man in which not less than six sacs or bags were in this manner produced by a protrusion of the internal coat of the bladder through the muscular, and which contained altogether nine stones\*. The stones are sometimes fixed so firmly that it is impossible to separate them by the forceps in performing the operation of lithotomy, without tearing the bladder or cutting one side of the sac; which last method M. Garangeot informs us he once tried with success. In several other cases, however, that he has described, the vessels of the bladder had spread luxuriantly over the stone, and apparently grown into it; and the extraction was followed by a mortal hemorrhage†. Generally speaking, calculi, when

GEN. IV.  
SPEC. II.

Lithia  
vesicalis.  
Stone in the  
bladder.

Treatment  
palliative  
and radical  
Palliative  
treatment  
of two  
kinds.

Plan reme-  
dial of the  
symptoms.

Sometimes  
the disease  
but little  
trouble-  
some:

as when the  
bladder  
has little  
irritability:  
or the stone  
has lodged  
in a pouch.

Singular  
examples  
of such  
lodgements

\* Mem. 462. Sect. 3.

† Mem. de l'Acad. de Chirurg. Tom. I.

GEN. IV.  
SPEC. II.  
Lithia  
vesicalis.  
Stone in the  
bladder.  
Treatment.

How far art  
may imi-  
tate any of  
these  
means.  
Irritability  
to be taken  
off.

Plan for  
preventing  
the en-  
largement  
of the cal-  
culus.

Its chemi-  
cal charac-  
ter must be  
first known  
by the pre-  
cipitate or  
crystalliza-  
tion of the  
urine.

Where al-  
kalies may  
be useful :

where acids.

The calcu-  
lus may be  
complica-  
ted of both :  
hence great  
caution ne-  
cessary as  
well as  
skill.

seated in pouches of this kind, continue without much disturbance for years, and sometimes for the whole of a man's natural life, of which Dr. Marcet has given various striking examples in his treatise.

Art cannot scoop out such convenient receptacles, but it may do something to allay the irritability of the bladder when severely excited, and in this manner palliate the distressing pain that is often endured. This may frequently be accomplished by the warm-bath ; by rubefaciens impregnated with opium applied to the region of the pubes, and in the course of the perinæum ; by cooling aperients and a steady use of sedatives, and particularly of conium. If these do not answer we must have recourse to opium, which will often succeed best and with least inconvenience to the constitution if introduced into the anus in the form of a suppository.

Our next intention should be to prevent, as far as possible, an augmentation of the calculus already existing in the bladder.

In order to accomplish this, it will be necessary to inform ourselves of its chemical constituents, for otherwise any method we may propose will probably do harm. From the remarks already made, it is obvious that the chief constituent principles of the calculi in the bladder, like those in the kidneys, are uric acid and bone-earth, or phosphate of lime. If the former predominate the urine will often throw down a precipitate or incrustation of red sand, if the latter, of white sand : and in the former case, as there is an excess of uric acid, our remedial forces must be derived from the alkalies and alkaline preparations to which we have already adverted under the preceding species : in the latter case, as there is, in all probability, a deficiency of acid, we must have recourse to an opposite mode of treatment, and employ the mineral and vegetable acids, with a diet chiefly composed of vegetables as recommended above under renal calculus.

But the calculus may consist of both, for it may exhibit, and often does, a nucleus of crystallized uric acid with laminæ of phosphate of lime, magnesia, or some

other substance: or, by carrying either of the above processes to an extreme, we may convert one morbid action into another. For if, by the use of alkalies, we diminish too much the secretion of uric acid, we may let loose the calcareous earth, which, in a healthy proportion, it always holds in solution, and hereby increase the vesical calculus by supplying it with this material; while, on the contrary, by an undue use of acids where these are required to a certain extent, we may obtain a secretion of uric acid in a morbid excess, and augment the stone in the bladder by a crystallization of an opposite kind. Hence a very considerable degree of skill and caution is requisite in the mode of treatment, and the character of the urine should be watched perpetually. Nor, where the calculus is of a still more composite kind, can either of these plans be attended with all the success they seem to ensure, so that the augmentation will sometimes be found to proceed in spite of the best directed efforts.

From the success that has attended the use of the colchicum *autumnale* in many cases of gout, and the tendency there is in many cases of this disease to form calculi in the joints, Mr. Brande has ingeniously thrown out the idea of trying the virtue of the colchicum in the disease before us, and hints that he has received from one quarter a very flattering account of its success, though not sufficiently precise for publication. If the reasoning pursued in examining the powers and effects of the colchicum in that part of the present work which is allotted to the history of gout be correct, we can have little hope of any permanent advantage from its use in respect to the lithic concretions before us. It has there appeared that the colchicum does not act as a preventive, but as an antidote, during the prevalence of a paroxysm. Nor does it act in this last way in all paroxysms, but chiefly, if not solely, in those of the regular form of gout, in which the general state of the constitution is sound and vigorous, while in atonic gout, it seems from the violence of

GEN. IV.  
SPEC. II.  
Lithia  
vesicalis.  
Stone in the  
bladder.  
Treatment.

Colchicum  
autumnale:

why not  
likely to be  
useful.



GEN. IV.  
SPEC. II.  
Lithia  
vesicalis.  
Stone in the  
bladder.  
Treatment.

its effects, not unfrequently to add to the evil. Yet it is in this last modification of gout that calculi are only found to concrete in the joints: the deposit rarely, if ever, taking place, till the constitution has been seriously shaken by a series of attacks, evidencing, as in the case of similar deposits in the coats of the vessels and the parenchyma of various organs in old people, a general torpitude and debility of the excrement system. Upon which subject the reader may turn to the genus OSTHEXIA \* in a preceding Order of the present Class.

Azotic re-  
gimen of  
Magendie.

There is something perhaps more plausible in the remedial regimen proposed by M. Magendie, who, on reflecting that azote is an essential constituent of urea and uric acid, advises that the patient be confined to food that possesses no sensible portion of azote, as sugar, gum, oil-olive, butter, and a vegetable diet generally †: thus treating it with a dietetic course directly the reverse of what is now generally proposed for paruria mellita, or diabetes.

Soundness  
of urine  
generally  
connected  
with sound-  
ness of  
stomach  
and adjoin-  
ing organs.

From the whole that has been advanced not only under the present genus, but also under much of the preceding, it is obvious that the soundness of the urine keeps pace, in a considerable degree, with the soundness of the stomach and its auxiliary organs, and is dependent upon them: and hence in calculous concretions of every kind it is of the utmost importance that the chyli-facient viscera, and the whole course of the intestinal canal, should be kept in as healthy a state as possible.

Hence  
tonics of  
use: par-  
ticularly  
bitters.

Astringents and bitters offer to us the best remedies for this purpose. From the supposed absorbent power of the former, Dr. Cullen, as we have already seen, ascribes to them much of the peculiar benefit resulting from the use of alkalies and magnesia, independently of their decided virtue as a tonic: nor ought we, while upon this subject, to overlook the advantage which, in calculi of

\* Supra, p. 342.

† Recherches Physiologiques et Medicales, &c. ut supra.

uric acid at least, the same distinguished writer asserts that he derived from the use of soap, which he ascribes entirely to its correcting acidity in the stomach \*; thus acting the same part as magnesia, and in many cases with greater potency.

If such be the difficulty of preventing a calculus already formed in the bladder from enlarging, we may readily see how hopeless must be every attempt at dissolving the matter that has already become crystallized or concremented. Calculi of uric acid will dissolve in caustic alkalies, but in no alkalies of less power; nor can those of the phosphates be acted upon by acids of any kind, except in a state far too concentrated for medical use. "These considerations," says Mr. Brande, "independently of more urgent reasons, show the futility of attempting the solution of a stone of the bladder by the injection of acid and alkaline solutions. In respect to the alkalies, if sufficiently strong to act upon the uric crust of the calculus, they would certainly injure the coats of the bladder: they would also become inactive by combination with the acids of the urine, and they would form a dangerous precipitate from the same cause. The acids, even when very largely diluted, and qualified with opium, always excite great irritation. They cannot, therefore, be applied strong enough to dissolve any appreciable portion of the stone, and the uric nucleus always remains as an ultimate obstacle to success†." The greatest impediment of all, however, consists in the difficulty of ascertaining the nature of the surface of the stone that is to be acted upon, and the diversity of substances of which its various laminæ very frequently consist: insomuch that had we glasses that could give us an insight into the bladder and unfold to us the nature of the first layer, and could we even remove this superficial crust by a solvent

GEN. IV.  
SPEC. II.  
Lithia  
vesicalis.  
Stone in the  
bladder.  
Treatment.  
Solution of  
stone in the  
bladder im-  
practicable,  
and why.

Other diffi-  
culties to  
be encoun-  
tered.

\* Mat. Med. Part II. Chap. x. p. 402.

† Journal, Vol. VIII. p. 215.

GEN. IV.  
SPEC. II.  
Lithia  
vesicalis.  
Stone in the  
bladder.  
Treatment.  
The most  
celebrated  
lithontrip-  
tics com-  
pounded of  
demulcents  
and seda-  
tives as well  
as caustics,  
and hence  
proved pal-  
liative, and  
were sup-  
posed to  
dissolve the  
stone.  
These pro-  
perties  
apply to  
Stephens's  
medicines.

of one kind, we should be perpetually meeting with other crusts that would require other lithontriptics; while the very means we employ to dissolve them, by decomposing the principles of the urine, would build up fresh layers faster than we could hope to destroy those that have already concreted.

In truth if we examine the most famous lithontriptics that have had their day, we shall find that by far the greater number of them were calculated to deceive either their own inventors, or the public, by a palliative rather than a solvent power. Some of them were oleaginous or mucilaginous; others, that contained a considerable portion of alkali, contained also some narcotic preparation: while a third sort seem to have acted by a diluent power alone, in consequence of being taken into the stomach or injected into the bladder in a very large quantity; and by these means all had a tendency to appease the irritation. Even Mrs. Stephens's rude and operose preparations which exercised so much of the analytical skill of Dr. Hales, and Dr. Hartley, and Dr. Lobb, and Dr. Jurin, and many other celebrated characters of their day, were combined with opium when the patient was in pain, and with aperients when he was costive; and through their entire use, with an abstinence from port wines and other fermented liquors, salt meats, and heating condiments, and with rest and a reclined position instead of exercise: and with these auxiliaries there is no great difficulty in supposing she might often succeed in allaying a painful fit of stone or irritation of the bladder, whatever may be the talismanic virtue of her egg-shells, and pounded snails, and best Alicant soap, and cresses, and burdock, and parsley, and fennel, and hips, and haws, and the twenty or thirty other materials that held a seat in the general council\*.

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\* See a full account of them in Edin. Med. Essays, Vol. v. Part II. Art. LXIX.

How far filling the bladder with sedative or demulcent injections may succeed in diminishing irritation and alleviating pain, has not perhaps been sufficiently tried: but from the supposed success of many of the old lithontriptics employed in this way, and whose virtue can be ascribed to no other cause, it is a practice worth adventuring upon in the present age of physiological experiments. When, however, there is much disease of the prostate or bulb of the urethra, the attempt should be desisted from, but wherever the sound can enter without much pain, we need not be afraid of increasing the irritation. This operation is of very ancient date, and of equally extensive range, as appears from a brief account, published in a professional journal of considerable merit, of the manner in which it is performed in the present era, and has been from time immemorial in the dominions of Muscat, beyond the mountains of Sohair in Arabia. The instrument employed is a catheter of gold made long enough to pass directly into the bladder, so as to avoid injuring any part of the urethra with such solvent as might be had recourse to. The usual form it appears, and I notice it for the purpose of confirming the remark I have made upon the nature of such lithontriptics as have been most in vogue in every age, consisted of a weak ley of alkali or alkaline ashes, united with a certain proportion of mutton suet and opium\*. And when we are gravely told that this preparation never fails to *dissolve* the stone, we are at no loss to settle the account upon this subject, and can trace the real cause of whatever degree of ease may have been derived from such an injection, and can allow that even the alkali itself, if not in too concentrated a state, may have been of occasional advantage.

When, however, all these means of relief fail, and the general health is worn out by a long succession of pain

GEN. IV.  
SPEC. II.  
Lithia  
vesicalis.  
Stone in the  
bladder.  
Treatment.  
Sedative  
and demul-  
cent injec-  
tions.  
Such expe-  
riments of  
very an-  
cient date:

and still  
practised in  
Arabia.

Usual in-  
jection em-  
ployed  
there.

Extraction  
of the stone.

\* Edin. Med. Comm. Vol. III. p. 354.



GEN. IV.  
SPEC. II.  
Lithia  
vesicalis.  
Stone in the  
bladder.  
Treatment.  
How far  
this may  
be accom-  
plished by  
dilating the  
urethra.  
Has some-  
times suc-  
ceeded in  
women.

and anxiety, nothing remains but the operation of ex- traction. The shortness and expansibility of the ure- thra in women which allows, as we have already seen, a passage for calculi of a considerable calibre to pass natu- rally, has suggested an idea of the possibility of intro- ducing a stone forceps into the female bladder so as to supply the place of lithotomy. The first hint of this kind that has occurred to me, is to be found in the Galli- cinium Medico-practicum of Gockel, published at Ulm in 1700. It was afterwards taken up, perhaps originally started, by Mr. Bromfield, who ingeniously advised that the urethra should, for this purpose, be dilated by forc- ing water through the gut of a fowl introduced into the urethra as an expansile canula. Mr. Thomas has since, by the use of a sponge-tent gradually enlarged for the purpose, succeeded in introducing his finger into the bladder, and bringing away an ivory ear-pick which had been incautiously used as a catheter, and had slipped into the cavity of this organ \*.

Lithotomy.

This, however, is a method that can never be applied to males, nor even successfully to females, except where the calculus is comparatively of small dimensions, or the meatus is so far dilated by the passage of former calculi as to render it unnecessary. In all other cases lithotomy offers the only means of removing the indissoluble stone from the bladder; and for the various modes in which this is performed, the reader must consult the writers on practical surgery.

Enormous  
weight of  
calculi in  
some cases.

Calculi thus extracted have been found of all weights and bulks. A stone from a quarter of a pound to half a pound may, perhaps, be regarded as the ordinary average: but they have sometimes grown to a much larger size, and have still been safely extracted. The largest for which lithotomy seems at any time to have been performed in this country, weighed forty-four ounces, and was sixteen

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\* Transactions of the Medico-Chir. Soc. Vol. I. p. 124.

inches in length. The operation was performed by Mr. Cline, but the stone could not be brought away, and the patient died a few days after \*. In a foreign journal of high reputation, we have an account of a calculus found in the bladder after death, that weighed four pounds and a half or seventy-two ounces, and seems to have filled nearly the whole of its cavity †.

GEN. IV.  
SPEC. II.  
Lithia  
vesicalis.  
Stone in the  
bladder.  
Treatment.

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\* Phil. Trans. year 1809.

† Bresl. Sammlung. Band. II. 1724. 434. 11.

## CLASS VI.

## ECCRITICA.

## ORDER III.

## ACROTICA.

**Diseases affecting the External Surface.**

PRAVITY OF THE FLUIDS OR EMUNCTORIES THAT OPEN  
ON THE EXTERNAL SURFACE; WITHOUT FEVER, OR  
OTHER INTERNAL AFFECTION, AS A NECESSARY ACCOM-  
PANIMENT.

CLASS VI. ACROTICA is a Greek term, from *ἄκρος*, “summus,”  
ORDER III. whence *ἀκρότης* -ητος, “summitas,” “cacumen.” The ex-  
Origin of cretories of the skin form a most important outlet of the  
ordinal system, and although the fluid they secrete is, in a state  
term. of health, less complicated than that of the kidneys, under  
Excretories a variety of circumstances it becomes more so. It is to  
of the skin this quarter that all the deleterious or poisonous ferments  
their exten- produced by eruptive fevers are directed by the reme-  
sive use: dial power of nature, as that in which they can be thrown  
off with least evil to the constitution. By the close sym-  
and sym- pathy which the surface of the body holds with the  
pathy with  
other  
organs;

stomach, the heart, the lungs, and the kidneys, its excretories are almost perpetually varying in their action, and still more so from their direct exposure to the changeable state of the atmosphere: in consequence of which they are one moment chilled, torpid, and collapsed, and perhaps the next violently excited and irritated: now dry and contracted, now relaxed and streaming with moisture; now secreting their natural fluid alone, and now charged with acrimonies of every kind, acid, alkaline, and saburral: and sometimes with a load of gluten or calcareous earth that hardens into horn or shell.

CLASS VI.  
ORDER III.  
Acrotica.  
Diseases affecting the external surface. the fluids they contain hence constantly affected.

But the mouths of the cutaneous exhalants are in their own nature peculiarly delicate and tender; and hence the necessity of their being covered by the epithelium of a fine cuticle, which defends them in a considerable degree from the rudeness of external impressions or irritants with which the air is impregnated. This defence, however, they frequently lose; often from external violence, and often also from the acrimony or roughness of the materials that are thus transmitted to them, and which excoriate as effectually as friction, a keen frosty north-east wind, or the direct rays of a tropical sun. And at times the absorbents of the skin are torpid or weak in their action; and the finer parts only of the fluids that are secerned are imbibed and carried off, while the grosser parts remain and accumulate in the cutaneous follicles, and become acrimonious from decomposition. And hence a great variety of superficial eruptions, papulous, pustulous, and ichorous, squammose, or furfuraceous. And not unfrequently there is a constitutional irritability of the skin which not only renders it peculiarly liable to be excited by small causes in every part, but to sympathize in the morbid action through its whole extent in whatever part it may commence: and hence the spread of eruptions to a greater or less extent, sometimes, indeed, over the entire surface.

Their mouths affected by external abrasion.

Sometimes by torpitude.

Sometimes peculiarly irritable.

From these sources of affection a variety of complaints must necessarily take their rise, none of them perhaps fatal to life, but many of them peculiarly troublesome

Hence a great variety of distinct complaints.



CLASS VI. and obstinate. They may be arranged under the following genera:

ORDER III.  
Acrotica.  
Diseases  
affecting  
the external surface.

- |                 |                        |
|-----------------|------------------------|
| I. EPIDROSIS.   | MORBID SWEAT.          |
| II. EXANTHESIS. | CUTANEOUS BLUSH.       |
| III. EXORMIA.   | PAPULOUS-SKIN.         |
| IV. LEPIDOSIS.  | SCALE-SKIN.            |
| V. ECPHLYSIS.   | BLAINS.                |
| VI. ECPYESIS.   | SCALL. TETTER.         |
| VII. MALIS.     | CUTANEOUS VERMINATION. |
| VIII. ECPHYMA.  | CUTANEOUS EXCRESCENCE. |
| IX. TRICHOSIS.  | MORBID HAIR.           |
| X. EPICHROSIS.  | MACULAR SKIN.          |

Most of these genera contain numerous species, many of which, though by no means all, form a part of Dr. Willan's arrangement, and have been described by himself or my late excellent friend Dr. Bateman, of whose labours I shall avail myself as far as they may answer the present purpose.

## GENUS I.

## EPHIDROSIS.

*Morbid Sweat.*

## PRETERNATURAL SECRETION OF CUTANEOUS PERSPIRATION.

EPHIDROSIS (*ἑφίδρωσις*) is a Greek term for “sudor.” The matter of sweat and that of insensible perspiration are nearly the same; the former consisting of the latter with a small intermixture of animal oil. It is affirmed by some writers that there are persons who never perspire. This demands ample proof; for experience teaches us that all warm-blooded animals either perspire by the skin, or have some vicarious evacuation that supplies its place, as in the case of the dog kind, in which an increased discharge of saliva seems to answer the purpose; though in violent agony, I have known a Newfoundland dog thrown into a sweat that has drenched the whole of his thick and wavy hair. In cold-blooded animals we sometimes find partial secretions, as in the lizards, the exudation from some of which, particularly the lacerta *Geitja* of the Cape of Good Hope, is highly acrid; and as it touches the hands and feet of men occasionally produces dangerous gangrenes. Generally speaking, however, cold-blooded animals secrete but a small quantity of fluid from the surface, and consequently suffer but little exhaustion or diminution of weight, and can live long without nourishment: and it is hence probable that, among mankind, those who throw off but a small quantity of halitus may exist upon a very spare supply of food; which may afford a solution to many of the won-

## GEN. I.

Matter of sweat and perspiration nearly the same. Whether there be persons who never perspire? All warm-blooded animals perspire or have some vicarious discharge. Instanced in the dog-kind.

Cutaneous exudation of lizards. Cold-blooded animals secrete but a small quantity of fluid. Those who perspire little, need but little supply of food.

GEN. I.  
Ephidrosis.  
Morbid  
sweat.

Proportion  
of insensi-  
ble perspi-  
ration to  
the food.

Sometimes  
secreted in  
excess, and  
hence the  
present  
genus.

derful stories of fasting persons, most of whom seem to have passed sedentary and inactive lives, recorded in the scientific journals of different countries, a subject we have already discussed \*: for the matter of insensible perspiration is calculated, upon an average, as being daily equal in weight to half the food introduced into the stomach in the course of the day. Thus if a man of good health and middle age, weighing about 146 pounds avoirdupois, eat and drink at the rate of fifty-six ounces in twenty-four hours, he will commonly be found to lose about twenty-eight ounces within the same period by insensible perspiration: sixteen ounces during the two thirds of this period allotted to wakefulness, and twelve ounces during the remaining third allotted to sleep.

It sometimes happens that this evacuation is secreted in excess, and becomes sensible, so as to render the whole, or various parts of the body, and especially the palms of the hands covered with moisture, without any misaffection of the system. It is to this species that the term ephidrosis has been usually applied and limited by nosologists. Sauvages, however, has employed it in a wider signification, so as to include various other species, and perhaps correctly; though Cullen inclines to regard all but the first as merely symptomatic of some other complaint.

The following appear to be those which are chiefly entitled to a specific rank :

- |    |                     |                 |
|----|---------------------|-----------------|
| 1. | EPHIDROSIS PROFUSA. | PROFUSE SWEAT.  |
| 2. | CRUENTA.            | BLOODY SWEAT.   |
| 3. | PARTIALIS.          | PARTIAL SWEAT.  |
| 4. | DISCOLOR.           | COLOURED SWEAT. |
| 5. | OLENS.              | SCENTED SWEAT.  |
| 6. | ARENOSA.            | SANDY SWEAT.    |

\* Vol. I. Class I. Ord. I. Limosis experts, p. 113.

## SPECIES I.

## EPHIDROSIS PROFUSA.

## Profuse Sweat.

## CUTANEOUS PERSPIRATION SECRETED PROFUSELY.

THIS is commonly a result of relaxed fibres : the mouths of the cutaneous exhalants being too loose and patulous, and the perspirable fluid flowing forth copiously and rapidly upon very slight exertions, sometimes without any exertion at all ; as we have already seen the urine flows in *paruria aquosa* and the serum in various species of dropsy.

There is here, generally speaking, less solution of animal oil than in perspiration produced by exercise or hard labour \* : but from the drain that is perpetually taking place, no animal oil accumulates, and the frame is usually slender. Corpulent persons also perspire much, but this is altogether from a different cause, being that of the weight they have to carry, and the labour with which breathing and every other function is performed in consequence of the general oppression of the system. Here also an extenuation of the frame would soon follow, but that from the peculiar diathesis which so readily predisposes to the formation of fat the supply is always equal to, and for the most part continues to exceed the waste, unless a more than ordinary course of exertion be engaged in.

In persons of relaxed fibres, but whose general health is sound, I have frequently perceived that there is no par-

GEN. I.  
SPEC. I.  
Pathology.  
In relaxed  
frames  
sweating  
produced  
by slight  
exertions.

Why copious in corpulent persons.

Those who perspire much, not always peculiarly liable to catch cold, and why.

\* Büchner, Diss. de Sudore colliquativo. Hal. 1757.



GEN. I.  
SPEC. I.  
Ephidrosis  
profusa.  
Profuse  
sweat.

The diathe-  
sis often  
pertinaci-  
ous, and  
changed  
with diffi-  
culty.  
Medical  
treatment.

ticularly liability to catch cold, notwithstanding this tendency to perspiration, and have very often seen it suddenly checked without any evil: such is the wonderful effect of an established habit. But the moment the general health suffers, or the system becomes seriously weakened by its continuance, the sweat is apt to become colliquative, and to terminate in a tabes or decline\*.

Tulpius gives a case of its continuing for seven years†. Astringents of all kinds have been tried, but with variable effects. Dr. Percival relied chiefly on bark; De Haen employed the white agaric‡, and in the Journal de Medicine §, the same medicine is recommended under the name of fungus *laricis*; it is the boletus *laricis* of the present day. It was given in the form of troches and pills. Cold sea-bathing, and the mineral acids, with temperate exercise, light animal food, and the use of a hair matrass instead of a down bed at night, have proved successful on many occasions, and form the best plan we can adopt.

## SPECIES II.

### EPHIDROSIS CRUENTA.

#### Bloody Sweat.

#### CUTANEOUS PERSPIRATION INTERMIXED WITH BLOOD.

GEN. I.  
SPEC. II.  
This species  
hitherto  
rarely  
described.

THIS species has not been very commonly described by nosologists; but the cases of idiopathic affection are so

\* See Vol. II. p. 713.

† Lib. III. Cap. 42.

‡ Rat. Med. P. XII. Cap. vi. § 6.

§ Tom. XLVII.

numerous and so clearly marked by other writers that it ought not to be passed over \*.

We have noticed a sympathetic and vicarious affection of this kind under the genus MISMENSTRUATION †, and have there observed that the cutaneous exhalants, in such instances, become enlarged in their diameter, and suffer red blood or a fluid of the appearance of red blood to pass through them. In cases of extreme debility from other causes, as in the last and fatal stage of atonic fevers, or in sea or land scurvy ‡ blood has been known to flow from the cutaneous exhalants in like manner, evidently from weakness, and a relaxation of their extremities, in connexion perhaps with a thinner or more dissolved state of the blood itself. None of these, however, are idiopathic affections. When the discharge shows itself as a primary disease, the cause has generally been some violent commotion of the nervous system forcing the red particles into the cutaneous excretories, rather than a simple influx from a relaxed state of their fibres. And hence it has taken place occasionally during coition §; sometimes during vehement terror; and not unfrequently during the agony of hanging or the torture ||. It is said also to have occurred in some instances in newborn infants ¶, probably from the additional force given to the circulation, in consequence of a full inflation of the lungs accompanied with violent crying.

GEN. I.  
SPEC. II.  
Ephidrosis  
cruenta.  
Bloody  
sweat.  
Pathologi-  
cal expla-  
nation.

Under what  
states of  
body the  
species  
occurs, and  
from what  
causes.

\* Ploucq. Init. vii. 316.

† Vol. III. p. 61.

‡ N. Act. Nat. Cur. Vol. iv. Obs. 41.

Bresl. Samml. 1725. I. p. 183.

§ Paulini, Cent. III. Obs. 46.

Eph. Nat. Dec. II. Ann. vi. Appx. pp. 4. 45. 55.

|| Bartholinus, Epist. I. p. 718.

¶ Eph. Nat. Cur. Dec. II. Ann. x. Obs. 65.

## SPECIES III.

## EPHIDROSIS PARTIALIS.

## Partial Sweat.

CUTANEOUS PERSPIRATION LIMITED TO A PARTICULAR PART OR ORGAN.

GEN. I.  
SPEC. III.  
Singular  
examples of  
abnormal  
perspira-  
tion.

THERE are some persons who rarely perspire, others who perspire far more freely from one organ than another as the head, or the feet, or the body. Such abnormities rather predispose to morbid affections, than are morbid affections themselves. Sauvages in illustration of the present species, quotes a case from Hartmann, of a woman who was never capable of being thrown into a sweat either by nature or art in any part of her body except when she was pregnant, at which time she perspired on the left side alone\*. Schmidt has noticed a like anomaly†.

Explana-  
tion.

In this last case it is probable that the kidneys became a substitute for the action of the cutaneous exhalants, as we see they do on various occasions, as when their mouths become collapsed from the chilly spasm that shoots over them on plunging into a cold bath, or in a fit of hysterics.

The sweat thus discharged from a partial outlet, is frequently fetid, as under the fifth species of the present genus; and where it is constitutional, it is often repelled with great danger to some more important organ.

\* Hartmanni, De Sudore unius lateris, 4to. 1740.

† Collect. Acad. Vol. III. p. 577.

## SPECIES IV.

## EPHIDROSIS DISCOLOR.

## Coloured Sweat.

CUTANEOUS PERSPIRATION POSSESSING A DEPRAVED  
TINCE.

SWEAT is often tinged with a deeper yellow than is natural to it from a resorption of bile into the blood-vessels : and, as we have already seen, it is sometimes intermixed with blood from violence, or a relaxed state of the cutaneous exhalants. And where these, or causes like these, co-operate, we can readily account for the various colours it has sometimes exhibited as green, black, blue, saffron, or ruby : examples of all which are referred to in the volume of Nosology. We see, indeed, the whole of these hues produced daily under the cuticle from the extravasation of blood, according as the effused fluid is more or less impregnated with the colouring matter of the blood, and the finer and more limpid parts are first absorbed and carried off. It is possible also that in some of the cases referred to, the stain may have been produced by inhaling a vapour impregnated with metallic corpuscles or some other pigment ; and especially when working in metallurgical trades or quicksilver mines.

GEN. I.  
SPEC. IV.

This species  
how produced.



## SPECIES V.

## EPHIDROSIS OLENS.

## Scented Sweat.

CUTANEOUS PERSPIRATION POSSESSING A DEPRAVED  
SMELL.

GEN. I.  
SPEC. V.  
This species  
gives rise  
to a variety  
of odours.

Mode of  
treatment.

THE varieties that have been chiefly noticed are those of a sulphureous scent; of a sour scent; of a rank or fetid scent; of a violet\*, and of a musky scent†. The rank or fetid scent is sometimes partial; being only evacuated from particular organs as the feet and axilla. De Monteaux, however, has found the same thrown off generally‡: and as a symptom in atonic fevers it must have been witnessed by most practitioners, as also in several sordid cutaneous eruptions. In fevers, moreover, we frequently meet with a secretion of sour perspiration, which, in a few instances, has had the pungency of vinegar. When such smells accompany diseases they usually cease on the cessation of the disease which gives rise to them. Where they are habitual they often depend upon a morbid state of the stomach, or of the cutaneous excretories; and will often yield to a course of aperients or alterants, a frequent use of the warm, and, when the constitution will allow, of the cold-bath, and such exercise as shall call forth a copious discharge of perspirable matter, and free the cutaneous follicles or orifices of whatever old materials may lurk there.

\* Paullini, Cent. i. Obs. 21.

Eph. Nat. Cur. Dec. ii. Ann. v. Appx. p. 9.

† Id. Dec. iii. Ann. ix. x. Obs. 96.

‡ Maladies de Femmes, Tom. ii.

Many of these, however, are often dependent upon the diet or manner of life. Thus the food of garlic yields a perspiration possessing a garlic smell: that of peas a leguminous smell, which is the cause of this peculiar odour among the inhabitants of Greenland; and acids a smell of acidity. Among glass-blowers, from the large quantity of sea-salt that enters into the materials of their manufacture, the sweat is sometimes so highly impregnated that the salt they employ and imbibe by the skin and lungs, has been seen to collect in crystals upon their faces. A musky scent is not often thrown forth from the human body, but it is perhaps the most common of all odours that escape from the skin of other animals. We discover it in many of the ape kind, and especially the simia *Jacchus*; still more profusely in the opossum, and occasionally in hedge-hogs, hares, serpents, and crocodiles. The odour of civet is the production of the civet-cat alone; the viverra *Zibetha*, and viverra *Civetta* of Linnéus, though we meet with faint traces of it in some varieties of the domestic cat. Among insects, however, such odours are considerably more common, and by far the greater number of them are of an agreeable kind, and of very high excellence; for the musk scent of the cerambix *moschatus*, the apis *fragrans*, and the tipula *moschifera*, is much more delicate than that of the musk quadrupeds: while the cerambix *suaveolens*, and several species of the ichneumon yield the sweetest perfume of the rose; and the petiolated sphex a balsamic ether highly fragrant, but peculiar to itself.

GEN. I.  
SPEC. V.  
Ephidrosis  
olens.  
Scented  
sweat.  
Treatment.

Scented  
vapour  
issuing from  
other ani-  
mals.

## SPECIES VI.

## EPHIDROSIS ARENOSA.

## Sandy Sweat.

CUTANEOUS PERSPIRATION CONTAINING A DISCHARGE OF  
SANDY OR OTHER GRANULAR MOLECULES.

GEN. I.  
SPEC. VI.  
Pathologi-  
cal expla-  
nation.

Exempli-  
fied in  
glass-  
blowers.

Red crys-  
tallized  
sandy  
sweat.

How ac-  
counted for.

As the odorous particles of both animal and vegetable food are sometimes absorbed by the lacteals and impregnate the matter of perspiration, so at times are the more solid particles of the materials employed in handicraft trades absorbed by the lungs, and equally thrown forth upon the surface. This, as observed under the last species, is particularly the case with glass-blowers, upon whose forehead and arms salt is often seen to collect and crystallize in great abundance, from the quantity of this material which they employ in the manufacture of glass, and its diffusion through the heated atmosphere of the workshop in minute and imperceptible particles.

But a reddish sandy material is occasionally found to concrete on the surface of the body under other circumstances and which cannot be charged to any material volatilized in the course of business. Bartholin, Schurig\*, Mollenbroek†, and various other writers have given instances of this kind of crystallization, which seems to consist in an excess of free uric acid, translated from the kidneys to the skin by an idiopathic sympathy, and forming red sand on the surface, as it probably would otherwise have done in the bladder or the urinal. It is

\* Litholog. p. 235.

† De Vasis, Cap. XIII.

possible, indeed, that a man may hereby escape from the fabrication of an urinary calculus, or stone in the bladder : and were such a transfer at all times in our power, we should gladly avail ourselves of it in many cases of a lithic diathesis, and employ it as a preventive of urinary concretions. When the sand is troublesome from the quantity collected the alkaline and other medicines recommended under *lithia renalis*\* will easily remove it†.

GEN. I.  
SPEC. VI.  
Ephidrosis  
arenosa.  
Sandy-  
sweat.

How to be  
remedied.

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\* Hist. Anat. Cent. i. 34.

† Supra, p. 511.



## GENUS II.

## EXANTHESIS.

**Cutaneous Blush.**

SIMPLE, CUTANEOUS, ROSE-COLOURED EFFLORESCENCE,  
IN CIRCUMSCRIBED PLOTS, WITH LITTLE OR NO ELEVA-  
TION.

GEN. II.  
Origin of  
generic  
term.

EXANTHESIS is a Greek compound from ἐξ “extra” and ἀνθέω “floreo, superficial or cutaneous efflorescence, in contradistinction to ENANTHESIS in Class III., Order IV. rash-fever or “efflorescence springing from within.”

This genus affords but one known species, the specific name for which is taken from Dr. Willan :

1. EXANTHESIS ROSEOLA.      ROSE-RASH.

## SPECIES I.

## EXANTHESIS ROSEOLA.

**Rose-Rash.**

EFFLORESCENCE IN BLUSHING PATCHES, GRADUALLY  
DEEPENING TO A ROSE-COLOUR, MOSTLY CIRCULAR,  
OR OVAL; OFTEN ALTERNATELY FADING AND REVIV-  
ING; SOMETIMES WITH A COLOURLESS UMBO; CHIEFLY  
ON THE CHEEKS, NECK, OR ARMS.

GEN. II.  
SPEC. I.  
Specific  
term in  
what sense  
used for-  
merly.

ROSEOLA was sometimes employed by the older writers, though in a very loose sense, to signify scarlet-fever,

measles, and one or two other exanthems that were often confounded : but as it is now no longer used for these it may stand well enough as a name for the present species, which Fuller has described as a flushing all over the body like fine crimson, which is void of danger, and “rather a ludicrous spectacle than an ill symptom\*.”

As a symptom this rash is frequently met with in various maladies. Thus in the dentition of infancy it appears on the cheeks; in the inoculated cow-pox, around the vesicle; in dyspepsy, and various fevers, in different parts of the body, constituting varieties, several of which by Dr. Willan are named, according to the disease they accompany, *Roseola infantilis*, *R. variolosa*, *R. vaccina*, and *R. miliaris* : but which, as mere symptoms of other disorders, are to be sought for in the diseases of which they occasionally form a part.

In the spring and autumn it often appears to be idiopathic especially in irritable constitutions. The occasional causes are fatigue, sudden alterations of heat and cold, or the drinking of very cold water after violent exercise. Dr. Willan mentions one instance of its occurring after sleeping in a damp bed. It has sometimes been mistaken for an eruption of the measles, and still oftener for that of a mild rosalia or scarlet-fever, of which last error the same author gives an example in a child that was extensively affected with it, about Midsummer, for several years in succession, and whose attendant physician informed the parents that the scarlet-fever had recurred in their child, seven times; and hence one reason why the same name was formerly applied to all these.

The attack is sometimes preceded during the heat of summer, by a slight febrile indisposition. It appears first on the face and neck, and, in the course of a day or two, is distributed over the rest of the body. The eruption spreads in small patches of various figures, but usu-

GEN. II.  
SPEC. I.  
Exanthesis  
roseola.  
Rose-rash.

As a symptom occurs in various other affections.

Idiopathic sometimes.  
Occasional causes.

Description.

\* Exanthematologia, p. 128.  
Bateman's Synops. 95.

GEN. II.  
SPEC. I.  
Exanthesis  
roseola.  
Rose-rash.

ally larger than those of measles, often as large as a shilling, at first of a brightish red, but soon settling into the deeper hue of the damask rose. It sometimes assumes an annular form, and appears over the body in rose-coloured rings with central areas or umbos of the usual colour of the skin: the rings being at first small, but gradually dilating to the diameter of half an inch.

Medical  
treatment.

This rash is troublesome, but of little importance otherwise. In the medical treatment of it the state of the stomach and bowels should be particularly inquired into, and, for the most part, will be found to require correction. Acidulated drinks, with occasional and gentle laxatives generally remove the disease, unless it be connected with any constitutional or visceral affection, when it sometimes proves very obstinate, and can only be cured by curing the primary malady.

## GENUS III.

## EXORMIA.

## Papulous Skin.

SMALL ACUMINATED ELEVATIONS OF THE CUTICLE ; NOT  
CONTAINING A FLUID, NOR TENDING TO SUPPURATION;  
COMMONLY TERMINATING IN SCURF.

FOR the acuminate elevation of the cuticle, which the Latins call papula, the Greeks had two synonymous terms *ecthyma*, (ἐκθύμα) and *exormia* (ἐξόρμια). The first was used most frequently in this sense ; but as this has by some unaccountable means been employed very generally to import a very different eruption, a crop of large pustulous, rather than of small solid pimples, forming a species of *ECPYESIS*, or the sixth genus of the present order, I have chosen the second term for the present purpose.

GEN. III.  
Synonyms.

The common terminating diminutive (*ula* or *illa*) is probably derived from the Greek ὕλη (ule or ile,) “*materia*,” “*materies*”—*of the matter, make, or nature of*; “*thus papula or papilla*,” of the matter or nature of pappus; “*lupula*,” of the matter or nature of the lupus; “*pustula*,” of the matter or nature of pus; and, so of many others.

Ula in papula and other terms whence derived.

Papula and pustula, which by Sauvages are degraded into mere symptoms of diseases, and not allowed to constitute diseases of themselves, are raised to the rank of genera by Celsus, Linnéus, and Sagar, and, under a plural form (*papulæ* and *pustulæ*), to that of orders by Willan. In the present system *exormia* and *ecphlysis*, intended to supply their place, are employed as generic

Papula and pustula of different authors.



GEN. III.  
Exormia.  
Papulous  
skin.

In what  
sense ap-  
plied to the  
present and  
ensuing ge-  
nera in the  
arrange-  
ment of  
this work.

terms, and run parallel with those papulæ and pustulæ of Willan, which are not essentially connected with internal disease; and are only made use of instead of papula and pustula, first as being more immediately Greek, and next, in order to prevent confusion from the variety of senses assigned to the latter terms by different writers. Exormia and ecphlysis, therefore, as distinct genera under the present arrangement, import eruptions of pimples and pustules in their simplest state, affecting the cuticle, or at the utmost the superficial integument alone, and consequently without fever, or other internal complaint as a necessary or essential symptom; although some part or other of the system may occasionally catenate or sympathize with the efflorescence. It is difficult, indeed, to draw a line of separation, and perhaps impossible to draw it exactly, between efflorescences strictly cutaneous and strictly constitutional, from the numerous examples we meet with of the one description combining with or passing into the other. But a like difficulty belongs to every other branch of physiology in the widest sense of the term, as well as to nosology; and all we can do in any division of the science, is to lay down the boundary with as much nicety and caution as possible, and to correct it, as corrections may afterwards be called for.

The species which belong to this genus, or which, in other words, are characterised by a papulous skin not necessarily connected with an internal affection are the following:

- |    |                     |                   |
|----|---------------------|-------------------|
| 1. | EXORMIA STROPHULUS. | GUM-RASH.         |
| 2. | —— LICHEN.          | LICHENOUS RASH.   |
| 3. | —— PRURIGO.         | PRURIGINOUS RASH. |
| 4. | —— MILIUM.          | MILLET-RASH.      |

## SPECIES I.

## EXORMIA STROPHULUS.

~~Gum~~-Rash.

ERUPTION OF RED PIMPLES IN EARLY INFANCY, CHIEFLY ABOUT THE FACE, NECK, AND ARMS, SURROUNDED BY A REDDISH HALO; OR INTERRUPTED BY IRREGULAR PLOTS OF CUTANEOUS BLUSH.

DR. WILLAN has observed, that the colloquial name of Red-gum, applied to the common form of this disease, is a corruption of Red-gown, under which the disease was known in former times, and by which it still continues to be called in various districts; as though supposed, from its variegated plots of red upon a pale ground to resemble a piece of red printed linen. In effect it is written Red-gown in most of the old dictionaries: in Littleton's as late as 1684, and I believe to the present day. The varieties in Willan are the following, whose descriptions are large and somewhat loose. We may extract from them, however, the subjoined distinctions of character:

GEN. III.  
SPEC. I.  
Red-gum  
was formerly  
called Red-  
gown.

- |                             |  |
|-----------------------------|--|
| α Intertinctus.<br>Red-gum. | Pimples bright red; distinct; intermixed with stigmata, and red patches; sometimes spreading over the body.                          |
| ε Albidus.<br>White-gum.    | Pimples minute, hard, whitish; surrounded by a reddish halo.   |
| γ Confertus.<br>Tooth-rash. | Pimples red, of different sizes, crowding or in clusters; the larger surrounded by a red halo; occasionally succeeded by a red crop. |

GEN. III.  
SPEC. I.  
Exormia  
strophulus.  
Gum-rash.

δ Volaticus.  
Wild-fire-rash.

Pimples deep-red, in circular patches, or clusters; clusters sometimes solitary on each arm or cheek; more generally flying from part to part.

ε Candidus.  
Pallid gum-rash.

Pimples large, glabrous, shining; of a lighter hue than the skin: without halo or blush.

General  
remarks in  
respect of  
cause;

Generally speaking none of these varieties are of serious importance; and all of them being consistent with a healthy state of all the functions of the body, they require but little attention from medical practitioners. Several of them are occasionally connected with acidity or some other morbid symptom of the stomach and bowels, and, hence, particular attention should be paid to the primæ viæ. The system, also, suffers generally, in many cases, if the efflorescence be suddenly driven inwards by exposure to currents of cold air or by the use of cold-bathing. Both these, therefore, should be avoided while the efflorescence continues; and if such an accident should occur, the infant should be immediately plunged into a warm-bath, which commonly succeeds in reproducing the eruption, when the constitutional illness ceases\*. In every variety, indeed, the nurse should be directed to keep the child's skin clean, and to promote an equable perspiration by daily ablutions with tepid water, which are useful in most cutaneous disorders; and will be found in other respects of material importance to the health of children.

and medi-  
cal treat-  
ment.

Particular  
remarks on  
E. strophu-  
lus con-  
fertus or  
tooth-rash.

In the tooth-rash, *strophulus confertus*, there is no difficulty in tracing the ordinary cause. Yet this also, has often been ascribed to a state of indigestion or some febrile complaint in the mother or nurse. "I have, however," says Dr. Willan, "frequently seen the eruption, where no such cause for it was evident. It may with more propriety be ranked among the numerous symptoms of

\* Bronzet, sur l'Education des Enfants, p. 187.

irritation arising from the inflamed and painful state of the gums in dentition, since it always occurs during that process, and disappears soon after the first teeth have cut through the gums." It may, however, like the red-gum, *s. intertinctus*, be occasionally connected with a weak and irritable state of the bowels: though the tender and delicate state of the skin, and the strong determination of blood to the surface, which evidently takes place in early infancy, and is the common proximate cause of the red-gum, is probably the common remote cause of the tooth-rash.

GEN. III.  
SPEC. I.  
Exormia  
strophulus.  
Gum-rash.

The tooth-rash is the severest form in which strophulus shows itself. Instead of being confined to the face and breast, it oftentimes spreads widely over the body, though it appears chiefly, in a diffused state, on the forearm. Dr. Willan notices a very obstinate and painful modification of this disorder which sometimes takes place on the lower extremities. "The papulæ spread from the calves of the legs to the thighs, nates, loins, and round the body, as high as the navel; being very numerous and close together, they produce a continuous redness over all the parts above-mentioned. The cuticle presently becomes shrivelled, cracks in various places, and finally separates from the skin in large pieces." It has some resemblance to the intertrigo, which however may be distinguished by having an uniform red, shining surface without papulæ, and being limited to the nates and thighs.

In like manner, those children are most liable to the scrophulus *volaticus* or wild-fire rash, who have a fair and irritable skin, though this also occasionally catenates with a morbid state of the stomach and bowels. It appears sometimes as early as between the third and sixth month, but more frequently later.

Particular  
remarks on  
E. strophu-  
lus volati-  
cus or wild-  
fire rash.

This last is the erythema volaticum of Sauvages, the æstus volaticus of many earlier writers: whence the French name of feu volage. All these terms, have however, been often used in a very indefinite sense, and hence, also applied to one or two species of porrigo, and especia-

Erythema  
volaticum.  
Æstus vo-  
laticus.



GEN. III.  
SPEC. I.  
Exormia  
strophulus.  
Gum-rash.  
Particular  
remarks on  
E. strophu-  
lus albidus  
and can-  
didus.

ally porrigo *crustacea* or *crusta lactea*\*. And hence, Dr. Armstrong has described this last disease as a strophulus or tooth-rash †.

The strophulus *albidus*, and strophulus *candidus*, are the two slightest varieties of this species of indispositions. The first is chiefly limited to the face, neck, and breast, and often continues in the form of numerous, hard, whitish specks for a long time, which on the removal of their tops do not discharge any fluid, though it is probable they were originally formed by a deposition of fluid, which afterwards concreted under the cuticle. The pimples in the scrophulus *candidus* are larger and diffused over a wider space; often distributed over the loins, shoulders and upper part of the arms; though it is rarely that they descend lower. Several of the varieties occasionally co-exist and run into each other particularly the first two ‡.

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## SPECIES II.

### EXORMIA LICHEN.

#### Lichenous Rash.

ERUPTION DIFFUSE; PIMPLES RED; TROUBLESOME SENSE OF TINGLING OR PRICKING.

GEN. III.  
SPEC. II.  
Origin of  
the tech-  
nical term.

LICHEN (λειχάν -ος) is a term common to the Greek phyto-  
logists as well as the Greek pathologists. By the  
former it is applied to that extensive genus of the algæ,

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\* Astruc, De Morb. Infant. p. 44.

† On the Diseases of Children, p. 34.

‡ Underwood, on the Diseases of Children, Vol. I. passim.

or rather to many of its species, which still retains the name of lichen in the Linnéan system: and it is conjectured by Pliny that the physicians applied the same name to the species of disease before us from the resemblance it produces on the surface of the body to many of the spotty and minutely tubercular lichens, which are found wild upon stones, walls, and the bark of trees or shrubs. Gorraeus, however, gives two other origins of the term; one, of which he does not approve, from the eruption being supposed to be cured by its being licked with the human tongue; and the other, to which he inclines, from its creeping in a lambent or tongue-like form, over different parts of the body. The derivation in both these cases being λείχω “lambo,” “lingo.”

GEN. III.  
SPEC. II.  
Exormia  
lichen.  
Lichenous  
rash.

It is a far more troublesome rash than the preceding; from the severest modifications of which, however, it chiefly differs by the intolerable tingling or pricking which accompanies, and peculiarly characterises it. The following are its chief varieties:

How far related to the preceding species.

α Simplex.

Simple Lichen.

General irritation; sometimes a few febrile symptoms at the commencement; tingling aggravated during the night; pimples scattered over the body; which fade and desquamate in about a week.

β Pilaris.

Hair-Lichen.

Pimples limited to the roots of the hair; desquamate after ten days; often alternating with complaints of the head or stomach.

γ Circumscriptus.

Clustering Lichen.

Pimples in clusters or patches of irregular forms, appearing in succession over the trunk and limbs; sometimes coalescing: and occasionally reviving in successive crops, and persevering for six or eight weeks.

GEN. III.  
SPEC. II.  
Exormia  
lichen.  
Lichenous  
rash.

♂ Lividus.  
Livid Lichen.

Pimples dark-red or livid; chiefly scattered over the extremities; desquamation at uncertain periods, succeeded by fresh crops, often persevering for several months.

♂ Tropicus.  
Summer-rash.  
Prickly-heat.

Pimples bright-red, size of a small pin's head; heat, itching, and needle-like pricking; sometimes suddenly disappearing, and producing sickness or other internal affection; relieved by the return of a fresh crop.

♂ Ferus.  
Wild Lichen.

Pimples in clusters or patches, surrounded by a red halo; the cuticle growing gradually harsh, thickened, and chappy: often preceded by general irritation.

♂ Urticosus.  
Nettle-Lichen.

Pimples very minute, slightly elevated, reddish: intolerably itching, especially at night; irregularly subsiding, and re-appearing; chiefly spotting the limbs; occasionally spreading over the body with gnat-bite-shaped wheals: from the violence of the irritation, at times accompanied with vesicles or blisters, and succeeded by an extensive exfoliation of the cuticle.

General  
remarks.

Under this species, as under the last, we may observe that all the varieties are in their purest state simple affections of the skin, though occasionally, probably from peculiarity of habit, or some accidental disorder of the digestive function, connected with the state of the consti-

tution or of the stomach or bowels. Dr. Willan, indeed, makes it a part of his specific character, that lichen is “connected with internal disorder: but his description is at variance with his definition; for with respect to the first variety, or simple lichen, he expressly asserts\*, that it “sometimes appears suddenly without any manifest disorder of the constitution; while in regard to the tropical lichen or prickly heat, one of the severest modifications under which the disease appears, he states, and with apparent approbation, from Winterbottom, Hillary, Clark, and Cleghorn, that it is considered as salutary; that even, “a vivid eruption of the prickly heat is a proof that the person affected with it is in a good state of health;”—that “its appearance on the skin of persons in a state of convalescence from fevers, &c. is always a favourable sign, indicating the return of health and vigour †;” that “it seldom causes any sickness or disorder except the troublesome itching and prickling ‡:” that it is not attended with any febrile commotion whilst it continues out §;” and that “it is looked upon as a sign of health, and, indeed, while it continues fresh on the skin, no inconvenience arises from it except a frequent itching ||.” And, in like manner, Dr. Heberden observes that some patients have found themselves well on the appearance of the eruption, but troubled with pains of the head and stomach during the time of its spread; but by far the greater number experience no other evil from it besides the intolerable anguish produced by the itching, which sometimes makes them fall away by breaking their rest, and is often so tormenting as to make them almost weary of their lives. Most of these remarks apply equally to the urticose variety, one of its severest forms, as I shall have occasion to observe presently.

GEN. III.

SPEC. II.

Exormia

lichen.

Lichenous

rash.

Not necessarily connected with internal disorder; though the contrary asserted by Willan, whose opinion is disproved by his own quotations.

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\* Willan, p. 39.

† Id. p. 35, from Winterbottom.

‡ Id. p. 59, from Hillary.

§ Id. p. 61, from Clark.

|| Id. p. 63, from Cleghorn.



GEN. III.  
SPEC. II.  
α E. lichen  
simplex.  
Simple  
lichen.  
Description  
and  
progress.

The SIMPLE LICHEN shows itself first of all by an appearance of distinct red papulæ about the cheeks and chin or on the arms, with but little inflammation round their base: in the course of three or four days the eruption spreads diffusely over the neck, body, and lower extremities, attended with an unpleasant sensation of tingling which is sometimes aggravated during the night. In about a week the colour of the eruption fades, and the cuticle separates in scurf. All the surface of the body, indeed, remains scurfy for a long time, but particularly the flexures of the joints. The duration of the complaint varies; and hence, in different cases, a term of from fourteen to thirty days intervenes between the eruption and a renovation of the cuticle. "The eruption sometimes appears suddenly without any manifest disorder of the constitution\*;" and sometimes there is a febrile state or rather a state of irritation at the beginning of the disorder though "seldom considerable enough to confine the patient to the house†"—and which is relieved by the appearance of the eruption. It has occasionally been mistaken for measles or scarlatina: but its progress, and, indeed, the general nature of its symptoms from the first are sufficiently marked to distinguish it from either of these.

Causes.

The causes are not distinctly pointed out by any of the writers, and it is singular that they should have been passed by both by Willan and Bateman. So far as I have seen, this and all the varieties depend upon a peculiar irritability of the skin as its remote cause, and some accidental stimulus as its exciting cause. The irritability of the skin is sometimes constitutional, in which case the patient is subject to frequent returns of the complaint; but it has occasionally been induced by various internal and external sources of irritation: as a diet too luxurious or too meagre; the debility occasioned by a protracted chronic disease, or an exacerbated state of the

\* Willan, ut supra, p 39.

† Id. p. 37.

mind; an improper use of mercury, or of other preparations that have disagreed either with the stomach, or the chylofacient viscera. Under any of which circumstances, a slight occasional cause is sufficient for the purpose, as exposure to the burning rays of a summer sun, a sudden chill on the surface, cold water drunk during great heat or perspiration; a dose of opium or any other narcotic, or substance that disagrees with the stomach or the idiosyncrasy. Dr. Heberden has suggested another cause, as perhaps operating in various cases, and inquires whether it may not be produced by some irritant floating in the atmosphere of so fine a structure as to be invisible to the naked eye, as the down of various plants or insects; and he particularly alludes to the delicate hairs of the *dolichos pruriens* or cowhage as occasioning the disease in the West Indies, from their attacking the skin in this manner imperceptibly. But since general ablutions afford little or no relief, and all medicated lotions are even more ineffectual; and as we can often trace it to other causes in our own country, and are at no loss for a different cause in the West Indies, the present can hardly be allowed to be the ordinary cause, though it may become an occasional excitement.

The remedial process should consist in keeping the bowels cool and free by neutral salts; a mixed diet of vegetables, ripe fruits, especially of the acescent kind, as oranges and lemons, and fresh animal food; with an abstinence from fermented liquors, a light and cool dress, an open exposure to pure air, and an occasional use of the tepid-bath. The mineral acids have sometimes proved serviceable, but not always; and the red or black hydrargyrus sulphuratus, has been thought useful by many. Where the system is evidently in an impoverished state from previous sickness, innutritive food, or any mesenteric affection, bark, the mineral acids, or the metallic tonics afford a reasonable hope of relief, and especially such preparations of iron as may sit easy on the stomach.

GEN. III.  
SPEC. II.  
α E. lichen  
simplex.  
Simple  
lichen.

Whether  
produced at  
any time by  
some irritant  
floating in the  
air.

Mode of  
treatment.

## GEN. III.

## SPEC. II.

♂ E. Lichen  
pilaris.

Hair lichen.

γ E. Lichen

circum-

scriptum.

Clustering

lichen.

♂ E. Lichen

lividus.

Livid

lichen.

The HAIR LICHEN, and CLUSTERING LICHEN differ from the preceding in little more than a difference of station or of form. Their causes or mode of treatment run parallel, and it is not needful to enlarge on them farther.

The LIVID LICHEN is evidently connected with a weak and debilitated habit. Its papulæ are often interspersed with petecchiæ, sometimes, indeed, with purple patches or vibices, and manifest a state of constitution bordering on that of scurvy or porphyra. Here the diet regimen and medical treatment should be altogether tonic and cordial, and may be taken from the plan already proposed for this last malady\*.

♂ E. Lichen

tropicus.

Prickly

heat.

Tropical

lichen.

Eshera or

The TROPICAL LICHEN, or PRICKLY HEAT, is a disease of high antiquity and is equally described by the Greek and Arabian writers. The latter denominate it ESHERA, (اشرة) which is the plural of sheri, (شري) literally *papulæ*, and hence THE PAPULÆ, or PAPULOUS DISORDER, by way of emphasis. And this term, softened or corrupted into *essera*, has been adopted and employed as the name of the disease by many European writers of great reputation, as Bartholin, Hillary, and Ploucquet. The term, however, has sometimes been used both in the East and among Europeans in a looser sense, so as occasionally, but most improperly, to embrace urticaria, and some other febrile rashes as well.

Essera.

The symptoms of the disease I shall give in the words of my valued friend Dr. James Johnson, whose excellent work on the Influence of Tropical Climates, I lament that I was not in possession of so early in the progress of the present undertaking as I could wish to have been. Dr. Johnson delineates the disease as he has felt it, and as, in recollection, he seems almost to feel it still, and hence his description flows

Warm from the heart and faithful to its fires.

\* Vol. II. p. 876.

“From mosquitoes,” says he, “cock-roaches, ants, and the numerous other tribes of depredators on our personal property, we have some defence by night, and, in general, a respite by day; but this unwelcome guest assails us at all, and particularly the most unseasonable hours. Many a time have I been forced to spring from table and abandon the repast, which I had scarcely touched, to writhe about in the open air, for a quarter of an hour: and often have I returned to the charge, with no better success, against my ignoble opponent! The night affords no asylum. For some weeks after arriving in India, I seldom could obtain more than an hour’s sleep at one time, before I was compelled to quit my couch, with no small precipitation, and if there were any water at hand, to sluice it over me, for the purpose of allaying the inexpressible irritation! But this was productive of temporary relief only; and what was worse, a more violent paroxysm frequently succeeded.

“The sensations arising from prickly heat are perfectly indescribable; being compounded of pricking, itching, tingling, and many other feelings, for which I have no appropriate appellation.

“It is usually, but not invariably accompanied by an eruption of vivid red pimples, not larger in general, than a pin’s head, which spread over the breast, arms, thighs, neck, and occasionally along the forehead, close to the hair. This eruption often disappears, in a great measure, when we are sitting quiet, and the skin is cool; but no sooner do we use any exercise that brings out a perspiration, or swallow any warm, or stimulating fluid, such as tea, soup, or wine, than the pimples become elevated, so as to be distinctly seen, and but too sensibly felt!

“Prickly heat, being merely a symptom, not a cause of good health, its disappearance has been erroneously accused of producing much mischief; hence the early writers on tropical diseases, harping on the old string of “humoral pathology,” speak very seriously of the danger of *repelling*, and the advantage of “encouraging the

GEN. III.  
SPEC. II.  
E. Lichen  
tropicus.  
Prickly  
heat.  
Tropical  
lichen.



GEN. III.  
SPEC. II.  
E. Lichen  
tropicus.  
Prickly  
heat.  
Tropical  
lichen.

eruption, by taking small warm liquors, as tea, coffees, wine whey, broth, and nourishing meats."

"Indeed, I never saw it even repelled by the cold bath; and in my own case, as well as in many others, it rather seemed to aggravate the eruption and disagreeable sensations, especially during the glow which succeeded the immersion. It certainly disappears suddenly sometimes on the *accession* of other diseases, but I never had reason to suppose, that its disappearance *occasioned* them. I have tried lime juice, hair powder, and a variety of external applications, with little or no benefit. In short, the only means which I ever saw productive of any good effect in mitigating its violence, till the constitution got assimilated to the climate, were—light clothing—temperance in eating and drinking—avoiding all exercise in the heat of the day—open bowels—and last, not least, a determined resolution to resist with stoical apathy its first attacks."

ζ E. Lichen  
ferus.  
Wild  
lichen.  
Agria of  
Celsus.

The wild lichen, or LICHEN FERUS, is particularly noticed by Celsus under the name of AGRIA, as applied to it by the Greeks from the violence with which it rages. It occurs in him after a brief description of a variety of papula of a milder kind, which Willan supposes, and with some reason, to be the clustering. "Altera autem est, quam Ἀγρίαν Græci appellant: in qua similiter quidem, sed magis cutis exasperatur, exulceraturque, ac vehementius et roditur, et rubet, et interdum inter pilos remittit. Quæ minus rotunda est, difficilior sanescit: nisi sublata est, in impetiginem vertitur\*." This variety, however, in its general range, its vehemence, and protracted duration, approaches nearer to the nettle-lichen than to any other: yet the pimples are larger, more clustered, and more apt to run into a pustular inflammation, so as often to produce cutaneous exulcerations and black scabs; and hence the remark of Celsus that it is disposed to ter-

\* De Medicina, Lib. vi. Cap. xxviii.

minate in an impetigo, or, as others have it, in psora or lepra.

The URTICOSE or NETTE-LICHEN is, perhaps, the most distressing form of all the varieties, if we except the tropical: and like the tropical, notwithstanding its violence, it is often totally independent of any constitutional affection. I can distinctly say from various cases that have occurred to me, that even where the patient has been worked up to such a degree of madness as to force him against his own will into a perpetual scratching, which greatly exasperates it, still the constitution has remained unaffected, the pulse regular, the appetite good, and the head clear. In most of the cases, the author alludes to, however, there was an established or idiopathic irritability of the system, and especially of the skin; and in one or two of them it was unfortunate that opium, under every form and in every quantity always increased the irritability; while no other narcotic was of any avail. I freely confess that I have been more perplexed with this obstinate and intractable variety, which has, in some cases, irregularly subsided for a few days or weeks, and then re-appeared with more violence than ever, than I have been with almost any other complaint that has ever occurred to me. A tepid bath and especially of sea-water has sometimes been serviceable, but I have often found even this fail; and have uniformly observed the bath mischievous when made hot; for the skin will not bear stimulation.

From the alterant apozems of sarsaparilla, elm-bark, juniper-tops, and snake-root, no benefit has accrued; and as little from sulphur, sulphurated quick-silver, nitre, the mineral acids, and the mineral oxydes and salts. I once tried the arsenic solution, but the stomach would not bear it. Sea-bathing, however, in connexion with sea-air, has rarely failed; and I am hence in the habit of prescribing it to a delicate young lady who has been several times most grievously afflicted with this distressing malady, as soon as it re-appears; as well from the known inefficacy of every other remedy, a long list of

GEN. III.  
SPEC. II.

„ E. Lichen  
urticosus.  
Nettle  
lichen.

The most  
trouble-  
some of all  
the species,  
but not ne-  
cessarily  
connected  
with the  
constitu-  
tion.

Most in-  
tractable in  
medical  
treatment.

GEN. III.  
SPEC. II.  
Exormia  
lichen.  
Lichenous  
rash.  
Treatment.  
How far re-  
lated to the  
wild lichen.

Singular  
modifica-  
tion de-  
scribed by  
Monsey.

which she has tried with great resolution, as from the benefit which this has almost uniformly produced.

I have said that the wild lichen in its severity and duration offers a near resemblance to this. The former, however, is more apt to run into a pustular inflammation, though in the nettle-lichen we sometimes find a few of the vesicles filled with a straw-coloured fluid, but which are not permanent. There is also a greater tendency to some constitutional affection in the wild than in the nettle modification, and particularly to a sickness or some other disorder of the stomach upon repulsion by cold. Under the nettle-lichen the patient seldom finds the stomach or any other organ give way, and will endure exposure to a sharp current of air with a full feeling of refreshment, without any danger of subsequent mischief.

There is a singular modification of this disease described in a letter from Dr. Monsey, of Chelsea College, to Dr. Heberden, in which the cause was exposure of the skin to a bright sun in the open air. The patient was a man thirty years of age, of a thin, spare, habit; and his skin, as soon as the solar rays fell upon it, became instantly almost as thick as leather, and as red as vermillion, with an intolerable itching: the whole of which abated about a quarter of an hour after he went into the shade. Dr. Monsey adds that this was not owing to the heat of the sun, for the sun in winter affected him full as much, if not more, and the heat of the fire had not such an effect. He was, in consequence, thrown into a state of "confinement for near ten years. It may not be amiss," continues Dr. Monsey, "to mention one particular, which is, that one hot day having a mind to try if he were at all benefited by his immersions" (he seems to have used a salt-bath under cover for many weeks) "he undressed himself and went into the sea in the middle of the day: but he paid very dearly for the experiment, the heat diffusing itself so violently over his whole body by the time he had put on his clothes, that his eye-sight began to fail, and he was compelled to lie down upon the ground to save himself from falling. The moment he



lay down the faintness went off; upon this he got up, but instantly found himself in the former condition: he, therefore, lay down, and immediately recovered. He continued alternately getting up and lying down till the disorder began to be exhausted, which was in about half an hour, and so gradually went off. He had frequently been obliged to use the same practice at other times, when he was attacked with this disorder.”

GEN. III.  
SPEC. II.  
Exormia  
lichen.  
Lichenous  
rash.  
Treatment.

That this case is to be regarded as a peculiar form of the present species, the extraordinary irritation and intolerable itching of the skin seem to vouch for sufficiently. It discovers, however, a cutaneous excitement of an idiopathic and most singular kind: and, keeping this idea in mind, it is not difficult to account for the tendency to deliquium related in the latter part of the account. The patient, it seems, could endure cold bathing under cover or in the shade, and was not rendered faint by the re-active glow that ensued upon his quitting the water; but when to this re-active glow was united, in consequence of his bathing in the open air and in the middle of the day, the pungent heat of the sun, he was incapable of enduring both, till, by a certain length of exposure to this conjoint stimulus, the cutaneous nerves became torpid, which it seems they did in about half an hour; when the affection we are told “gradually went off.”

Singulari-  
ties of the  
case ex-  
plained.

A daily exposure to the same exhausting power would, in all probability, soon have rendered the torpitude habitual, or at least have reduced the cutaneous sensibility to its proper balance, which, after all, forms the real cure in the West Indies, and in most of the chronic cases of our own country. This, however, does not seem to have been thought of: but, after having tried a long list of different series of medicines in hospital and in private practice to no purpose, the patient was at length fortunate enough, when under the care of Dr. Monsey, to be put, as a forlorn hope, upon a brisk course of calomel, of which he took five grains every night with a purge of rhubarb or cathartic extract the ensuing morning for

Beneficial  
effects of  
calomel.



GEN. III.  
SPEC. II.

nearly a fortnight in succession; and having thus transferred the morbid irritability of the skin to the intestinal canal, the disease left him.

### SPECIES III.

## EXORMIA PRURIGO.

### Pruriginous Rash.

ERUPTION DIFFUSE: PIMPLES NEARLY OF THE COLOUR OF THE CUTICLE; WHEN ABRADED BY SCRATCHING OOOZING A FLUID THAT CONCRETES INTO MINUTE BLACK SCABS; INTOLERABLE ITCHING, INCREASED BY SUDDEN EXPOSURE TO HEAT.

GEN. III.  
SPEC. III.  
How far related to lichen.

IN the symptoms of a papular eruption, and an intolerable itching, this species bears an approach towards the preceding: but it differs from it essentially in the colour of the papulæ, and in the nature of the itching, which is often far more simple; and, when combined with a sense of stinging, gives a feeling peculiar to itself, like that of a nest of ants creeping over the body and stinging at the same time.

It offers the three following varieties, the last of which chiefly differs from the second in being more inveterate:—

*a* Mitis.  
Mild Prurigo.

Pimples soft and smooth: itching at times subsiding; chiefly common to the young and in spring time.

6 Formicans.  
Emmet-prurigo.

Pimples varying from larger to more obscure than in the last; itching incessant, and accompanied with a sense of pricking or stinging, or of the creeping of ants over the body; duration from two months to two or three years, with occasional but short intermissions: chiefly common to adults.

GEN. III.  
SPEC. III.  
Exormia  
prurigo.  
Pruriginous  
rash.

7 Senilis.  
Inveterate prurigo.

Pimples mostly larger than in either of the above, sometimes indistinct, giving the surface a shining and granulated appearance; itching incessant: common to advanced years, and nearly inveterate.

In all the varieties the itching differs in its extent: being sometimes limited to a part only of the body, and sometimes spreading over the entire frame\*. Courmette relates a case in which it alternated from side to side†: and in many instances it appears periodically. Hence, in Willan we have not only an account of the three preceding varieties, but of several others, which chiefly, if not entirely, differ from them in being limited to particular parts; as prurigo podicis, p. præputii, p. urethralis, p. pubis, p. pudendi muliebris.

General  
remarks

A common cause of this species in all its varieties, though by no means the only cause, is want of proper cleanliness of the skin and of apparel; and hence it is found most frequently in the hovels of the poor, the squalid, and the miserable. Yet as it is not always found under these circumstances even where there is the

General  
causes and  
ordinary  
abode.

\* Sitonius, Tr. 34, Loescher.

† Journ. Med. Tom. LXXXV.

GEN. III.  
SPEC. III.  
Exormia  
prurigo.  
Pruriginous  
rash.  
Particular  
causes.

grossest uncleanness, some other cause jointly operating in such situations, some idiopathic condition of the skin by which the sordes thus collected and obstructing the mouths of the cutaneous exhalants becomes an active irritant, must be admitted. One of these conditions appears to be a skin peculiarly delicate and sensible, which is mostly to be found in early life; and another, a skin peculiarly dry and scurfy, which is a common condition of old age; on which account repelled perspiration is correctly set down as a cause by Riedlin. Even in the cleanliest habits, these peculiarities of the skin often become causes of themselves, and of a more intractable kind than mere sordes, as they are far more difficult of removal. A diet of fish alone has sometimes excited such a habit: and an habitual addiction to spirituous drinks, whether wine, ale, or alcohol, produces also, in many persons, a like sensibility of the surface, and lays a foundation for the disease in its most obstinate form.

The papulæ when chronic form exulcerations. Which sometimes become nests for parasitic insects as the acarus and pediculus. often altered in their form from the luxuriance of their repast. Illustration.

Where the rash continues long and becomes pertinacious, the papulæ form minute exulcerations, degenerating, in the first variety, into a species of contagious itch, and in the second, into a running scall; which last, in the third or inveterate variety, sometimes forms nests for various parasitic insects\*, and especially for several species of the acarus and pediculus, to which Dr. Willan adds the pulex. In treating of intestinal animalcules, we had occasion to observe that "they appear, from the luxuriance of their haunts and repasts, to be; in various instances, peculiarly enlarged and altered from the structure they exhibit out of the body; whence a difficulty in determining, in many cases, the exact external species to which a larve, worm, or animalcule found within the body may belong†." This remark applies with peculiar force to the parasites detected in the dis-

\* Sommer, Diss. de affectibus pruriginosis Senâum.

Loescher, Diss. de pruritu senili totius corporis. Witeb. 1728.

† Vol. I. Helminthia erratica. p. 308.

eases before us, some of which grow to such an enormous size, and with such altered characters from rioting on so plentiful a supply of juices, that it is by no means easy to recognize them. Dr. Willan describes an insect of this kind found in great abundance on the body of a patient suffering under the inveterate prurigo, which he at first took for a pediculus, though from the nimbleness of its motions, as well as from other characters, he at length ascertained it to be a pulex, not described by Linneus: more probably, from the causes just stated, so altered in its form, as not to be easily referred to the species to which it really belongs.

Thorough and regular ablution and cleanliness are here, therefore, peculiarly necessary, and these will often succeed alone, especially in the first variety. If they should not, sulphur and the sulphureous waters, as that of Harrowgate, taken internally and applied to the skin itself, have sometimes been found serviceable. Fossile alkali combined with sulphur and taken internally with infusion of sassafras or juniper tops is peculiarly recommended by Dr. Willan. If the constitution have suffered from a meagre diet, or be otherwise exhausted, general tonics and a nutritive food must necessarily form a part of the plan.

In many cases, however, of the second variety, and in still more of the third, this pertinacious and distressing complaint bids defiance to all the forms of medicine, or the ingenuity of man: and I cannot adduce a stronger illustration of this remark than by referring to an attack which it has lately made on one of the brightest ornaments of medical science in our own day, whose friendship allows me to give the present reference to himself. It is now considerably more than a year and a half since he was first visited with this formicative but colourless rash which affected the entire surface, but chiefly the legs: and he has since tried every mean that the resources of his own mind or the skill of his medical friends could suggest, yet for the most part without any thing beyond a palliative or temporary relief. The tepid

GEN. III.  
SPEC. III.  
Exormia  
prurigo.  
Pruriginous  
rash.

Medical  
treatment.

Sometimes  
peculiarly  
pertina-  
cious.  
Striking  
illustration.

General  
course of  
medicines  
tried in  
vain.



GEN. III.  
SPEC. III.  
Exormia  
prurigo.  
Pruriginous  
rash.

Cold spring  
water as a  
lotion and  
free doses  
of opium  
serviceable.

Animal spi-  
rits not af-  
fected;  
nor appe-  
tite.

bath produced more harm than good, though several times repeated; Harrowgate water internally and externally had recourse to has been of as little avail: acids and alkalies, separate or conjoined, in whatever way made use of, have failed equally: nor have purgatives or diaphoretics or any of the alterative diet drinks, or the alterative metallic preparations answered better. The coldest spring water employed as a bath or lotion, and free doses of opium as a sedative, are the only medicines from which he has at any time derived any decided relief, and these have constantly afforded it for a short time. In the middle of the coldest nights of last winter, and the still colder nights of the winter before, he was repeatedly obliged to rise and have recourse to sponging with cold water, often when on the point of freezing. The opium he has taken never effected real sleep, nor abated the complaint but generally threw him into a quiet kind of a revery which produced all the refreshment of sleep: and to obtain this happy aphelxia or abstraction of mind he has been compelled to use the opium in large doses, often to an extent of ten grains every twenty-four hours, for weeks together, and rarely in less quantity than five or six grains a day and night for many months in succession. The change operated on the general habit by this peculiar sensibility of the skin is not a little singular; for first, in the midst of the distraction produced by so perpetual a harassment, and the necessary restlessness of nights, neither his animal spirits nor his appetite have in any degree flagged, but, upon the whole, rather increased in energy, and his pulse has held true to its proper standard. And next, though opium was wont to disagree with him in various ways antecedently, it has proved a cordial to him through the whole of this tedious affection without a single unkindly concomitant, and has never rendered his bowels constipated. From the long continued excess of action there was at length an evident deficiency in the restorative power of the skin: for two excoiations arising from the eruption, degenerated into slough-

ing ulcers. At the present period, forming a distance of nineteen or twenty months from the first attack, he is apparently getting well; the skin which has been so long in a state of excitement is losing its morbid sensibility, and becoming torpid: he has rarely occasion to have recourse to cold ablutions, but dares not trust himself through the day without a dose of opium, as an exhilarant, though the quantity is considerably reduced. He has also, for many months, been taking the bark and soda as a general tonic. Perhaps the most instructive part of this case is the great advantage and safety of the external application of cold water, as a refrigerant and tonic in cutaneous eruptions accompanied with intolerable heat and irritation. And it is possible that half the wells, which in times of superstition were dedicated to some favourite saint, and still retain his proper name, derive their virtue from this quality rather than from any chemical ingredient they contain, which has often as little to do with the cure as the special interposition of the preternatural patron.

GEN. III.  
SPEC. III.  
Exormia  
prurigo.  
Pruriginous  
rash.

---

#### SPECIES IV.

### EXORMIA MILIUM.

#### ~~Millet-Rash.~~

PIMPLES VERY MINUTE; TUBERCULAR; CONFINED TO THE FACE; DISTINCT; MILK-WHITE; HARD; GLABROUS; RESEMBLING MILLET-SEEDS.

THIS species is taken from Plenck who denominates it *grutum sive milium*. It is a very common form of simple pimple or exormia, and must have been seen repeat-

GEN. III.  
SPEC. IV.  
Grutum of  
Plenck,

GEN. III.

SPEC. IV.

Exormia

milium.

Millet-

rash.

resem-

blance to

strophulus

albidus :

in what re-

spect dis-

crepant.

Medical

treatment.

edly by every one, though, with the exception of Plenck, I do not know that it has hitherto been described by any nosologists. It has a near resemblance to the white-gum of children, as described by Dr. Underwood, the strophulus albidus of Willan, and the present system. But the pimples in the milium are totally unattended with any kind of inflammatory halo or surrounding redness : and are wholly insensible. They are sometimes solitary, but more frequently gregarious. It is a blemish of small importance and rarely requires medical interposition : but as it proceeds from a torpid state of the cutaneous excretories, or rather of their mouths or extremities which are balled up by hardened mucus, stimulant and tonic applications have often been found serviceable, as lotions of brandy, spirit of wine, or tincture of myrrh, or a solution of sulphate of zinc with a little brandy added to it.

When this species becomes inflamed it lays a foundation for a varus or stone-pock, which we have already described under the order of INFLAMMATIONS in the third class of the present sytem\*.

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\* Vol. II, p. 291.

## GENUS IV.

## LEPIDOSIS.

## Scale=Skin.

EFFLORESCENCE OF SCALES OVER DIFFERENT PARTS OF  
THE BODY, OFTEN THICKENING INTO CRUSTS.

LEPIDOSIS is a derivative from *λεπίς -δος*, "squamma." The Greek is preferred to the Latin term, in concurrence with the general rule adopted in the present system in regard to the names of the classes, orders, and genera. The genus includes those diseases which consist in an exfoliation of the cuticle in scales or crusts of different thickness, and with a more or less defined outline, in many cases owing to a morbid state or secretion of the rete mucosum or adipose layer of the part immediately beneath, which is sometimes too dry, or deficient in quantity; sometimes perhaps absent altogether; sometimes charged with a material that changes its natural colour; and sometimes loaded with an enormous abundance of a glutinous fluid, occasionally combined with calcareous earth. In the severer cases the true skin participates in the change.

As this colorific substance, forming the intermediate of the three lamellæ that constitute the cutaneous integument, is only a little lighter in hue than the true skin among Europeans, it is not often that we have an opportunity in this part of the world of noticing the changes effected upon it by different diseases: but as among negroes it contains the black pigment by which they are distinguished, such changes are very obvious and frequent: for the individual is sometimes hereby, as we shall see presently, rendered pye-balled, or spotted black

GEN. IV.  
Origin of  
the generic  
term.

General  
character  
of the  
genus.

Rete mu-  
cosum  
frequently  
affected.

Illustrated.



GEN. IV.  
Lepidosis.  
Scale-skin.

and white, and there are instances in which the whole of this substance, or rather of its colouring part, being carried off by a fever, a black man has suddenly been transformed into a white.

Sometimes  
the cuticle  
hereby se-  
parated  
from the  
cutis.

Changes of this kind often occur without any separation of the cuticle from the cutis; but if the fever be violent such separation takes place over the entire body, and the cuticle is thrown off in the shape of scurf, or scales, or a continuous sheath. And sometimes the desquamation from a hand has been so perfect that the sheath has formed an entire glove. The same effect has followed occasionally from other causes than fever, as on an improper use of arsenic \* or other mineral poisons, on being bitten by a viper †, and sometimes on a severe fright ‡. There are various instances in which the nails have been exfoliated with the cuticle §, and others in which the hair has followed the same course. Sometimes, indeed, a habit of recurrence has been established and the whole has been thrown off and renewed at regular periods ||, in one instance once a month ¶.

together  
with the  
nails and  
hair:  
separated  
periodi-  
cally.

Minute ex-  
foliations  
in the pre-  
sent genus.

In the genus before us the exfoliations are of a more limited kind, and in some instances very minute and comparatively insignificant. In the severer forms, however, the true skin participates in the morbid action, and the result is far more troublesome.

The species it presents to us are the following :

- |    |                       |                               |
|----|-----------------------|-------------------------------|
| 1. | LEPIDOSIS PITYRIASIS. | DANDRIF.                      |
| 2. | LEPRIASIS.            | LEPROSY.                      |
| 3. | PSORIASIS.            | { DRY SCALL.<br>SCALY TETTER. |
| 4. | ICTHYIASIS.           | FISH-SKIN.                    |

\* De Haen, Rat. Med. Part x. Cap. 11.

† Eph. Nat. Cur. Dec. I. Ann. IV. v. Obs. 38.

‡ Act. Nat. Cur. Vol. VII. Obs. 43.

§ Eph. Nat. Cur. Dec. III. Ann. II. Obs. 124.

|| Gooch, Phil. Trans. 1769.

¶ Eph. Nat. Cur. Dec. III. Ann. I. Obs. 134.

## SPECIES I.

## LEPIDOSIS PITYRIASIS.

**Dandriff.**

PATCHES OF FINE BRANNY SCALES, EXFOLIATING WITHOUT CUTICULAR TENDERNESS.

THIS species is the slightest of the whole : its varieties are as follow : GEN. IV.  
SPEC. I.

α Capitis. Scales minute and delicate:  
Dandriff of the head. confined to the head;  
easily separable. Chiefly  
common to infancy and  
advanced years.

ε Rubra. Scaliness common to the  
Red dandriff. body generally; preceded  
by redness, roughness,  
and scurfiness of the sur-  
face.

γ Versicolor. Scaliness in diffuse maps  
Motley dandriff. of irregular outline, and  
diverse colours, chiefly  
brown and yellow; for  
the most part confined  
to the trunk.

Pityriasis is a term common to the Greek Physicians, who concur in describing it, to adopt the words of Paulus of Ægina, as “the separation of slight furfuramatters (πιτυρώδων σωμαίων), from the surface of the head, or other parts of the body, without ulceration.” The same character is given by the Arabian writers, and especially by Avicenna and Ali Abbas. But several

Import of  
the specific  
term  
used by  
Greek and  
Arabian  
writers.

GEN. IV  
SPEC. I.  
Lepidosis  
pityriasis.  
Dandriff.

How dis-  
tinguished  
from por-  
rigo.

α L. Pity-  
riasis  
capitis.  
Dandriff of  
the head.

Mode of  
treatment.

ε L. Pity-  
riasis  
rubra.  
Red dan-  
driff.

writers, both Greek and Arabian, who have thus described it generally, limit its extent to the head, which is the ordinary seat of the porrigo or scabby scall, characterized by ulceration, and a purulent discharge, covered by minute scabs; and hence in some writers pityriasis has been confounded with porrigo; or, in other words, the dry and branny scale with the pustular scab; which, however, there is no difficulty in accounting for, since the first variety, whose seat is also in the head, has a tendency, if neglected, and the minute and scurfy scales grow thicker and broader, and crustaceous, to degenerate into porriginous pustules.

The FIRST VARIETY, or dandriff of the head, when it attacks infants, exhibits minute scales, and when it appears in advanced age, scales of larger diameter. It shows itself at the upper edge of the forehead and temples as a slight whitish scurf, set in the form of a horse-shoe; on other parts of the head there are also cuticular exfoliations, somewhat larger, flat and semipellucid. Sometimes, however, they cover nearly the whole of the hairy scalp, imbricate in position, or with an overlap, as in tiling.

Little attention is necessary to this complaint beyond that of cleanliness, and frequent ablution; where, however, the hairy scalp is attacked it is better to shave the head, when the scales may be removed by a careful use of soap and warm water, or by an alkaline lotion. This is the more expedient because the scales in this situation are often intermixed with sordes, and pustules containing an acrimonious lymph are formed under the incrustations; and in this way pityriasis, as we have already observed, may, and occasionally does, degenerate into porrigo.

The SECOND VARIETY, or red dandriff, sometimes affects the general health in a perceptible degree from the suppression which takes place in the perspiration, and the consequent dryness, stiffness, and soreness of the skin; and the general itching which hence ensues, is often productive of much restlessness and languor.

This, which is the severest modification of the disease, appears chiefly at an advanced period of life, though it is not limited to old age. A tepid bath of sea-water is, perhaps, the most useful application, as serving to soften the skin, and produce a gentle diapnoe. With this external remedy Dr. Willan advises we should unite the compound decoction of sarsaparilla, and antimonials, which operate towards a like effect. The tinctura hellebori nigri in small doses has also sometimes been found useful; and, where the irritability of the skin is not very great, Dr. Bateman was in the habit of using a gently restraining lotion or ointment, consisting of the superacetate of lead with a certain proportion of borax or alum.

GEN. IV.  
SPEC. I.  
c. L. Pity-  
riasis  
rubra.  
Red dan-  
driff.  
Mode of  
treatment.

The variegated or MOTLEY DANDRIF, pityriasis versicolor, often branches out over the arms, back, breast, or abdomen, but rarely in the face, like many foliaceous lichens growing on the bark of trees; and sometimes, where the discolouration is not continuous, suggests the idea of a map of continents, islands, and peninsulas, distributed over the skin.

γ L. Pity-  
riasis ver-  
sicolor.  
Motley  
dandriff.

We have a more distinct proof of a morbid condition of the rete mucosum, or adipose colorific layer of the skin in this than in any other affection belonging to the entire genus. The morbid action, indeed, seems confined to this quarter and consists in the secretion of a tarnished pigment, though possibly, in some instances, it may be only discoloured by a mixture with a small portion of extravasated blood. And, were it not for the furfuraceous scales which determine its real nature, this affection would belong to the genus EPICHRYSIS of the present order. There is no elevation; and the staining rarely extends over the whole body. Dr. Willan tells us that it seldom appears over the sternum or along the spine of the back. I had lately a patient, however, in a gentleman about forty years old, who was suddenly attacked with a discolouration and branny efflorescence of this kind, which extended directly across the spine over the loins, and very nearly girded the body. It

Striking  
proof of an  
affection of  
the rete  
mucosum.

Relation  
to the  
genus epi-  
chrosis.

Rarely ap-  
pears over  
the spine,  
but some-  
times.

Strikingly  
exempli-  
fied.



GEN. IV.  
SPEC. I.  
γ-L. Pity-  
riasis ver-  
sicolor.  
Motley  
dandriff.

Is of long  
continu-  
ance, some-  
times for  
years.

Pityriasis  
nigra of  
Willan.

continued upon him for about three years without any constitutional indisposition, or even local disquietude, except a slight occasional itching, and then went away as suddenly as it made its appearance. The hue was a fawn-colour: and, as the patient was anxious to lose it, he tried acids, alkalies, and other detergents of various kinds, but without any effect whatever. This variety of dandriff generally continues for many months, and not unfrequently, as in the present case, for several years. Being altogether harmless, it requires no medical treatment.

The pityriasis nigra of Willan referred to by Bate-  
man, but only glanced at by either of them, so far as I  
have seen it, is rather a modification of the genus EPI-  
CHROSIS, and species Pœcilia, under which it will be  
noticed. It is a cuticular discolouration but without cu-  
ticular exfoliation.

## SPECIES II.

### LEPROSIS LEPRIASIS.

#### Leprosy.

GEN. IV.  
SPEC. II.  
Vitiligo of  
Celsus.  
Origin of  
generic  
term.  
Lepriasis  
why pre-  
ferred to  
lepra.

THIS genus constitutes the vitiligo of Celsus. The term  
LEPRIASIS is a derivative from λεπρός “scaber, vel asper  
ex squammulis decedentibus;” with a termination appro-  
priated by a sort of common consent, to the squamose  
tribe of diseases\*. Lepra, which is the more common  
term is derived from the same root: but lepriasis is pre-  
ferred to lepra as a more general term, and hence better  
calculated to comprise the different varieties of this

\* See the Author's volume of Nosology. Prelim. Diss. p. 60.

species so generally described or referred to by the Greek and Oriental writers, but whose descriptions, not very definite when first written, at least with a few exceptions, have been rendered altogether indefinite and incongruous in modern times, from a misunderstanding or confusion of the names under which the descriptions are given.

The embarrassment which Dr. Bateman felt upon this subject when writing on the genus ELEPHANTIASIS, and which has been noticed already\*, he was equally sensible of when he came to LEPRA, and the researches of Dr. Willan gave him little or no assistance. I could not then find time to render him the aid he stood in need of, but I have since directed my attention to the subject, and will now give the reader its results as briefly as possible.

In the admirable and exact description of the cutaneous efflorescences and desquammations, to which the Hebrew tribes were subject on their quitting Egypt, and which they seem to have derived from the Egyptians, drawn up by Moses, and forming a part of the Levitical law†, there are three that distinctly belong to the present species, all of them distinguished by the name of BERAT (בהרת) or "BRIGHT SPOT;" one called BOAK (בהק) which also imports brightness, but in a subordinate degree, being "a dull-white beras," not contagious, or, in other words, not rendering a person unclean, or making it necessary for him to be confined; and two called TSORAT (צרעת) "venom or malignity: the one a berat *lebena* or "bright-white berat‡," and the other a berat *cecha*, "dark or dusky berat§," spreading in the skin; both of which are contagious, or, in other words, render the person affected with it unclean and exclude him from society||.

GEN. IV.

SPEC. II.

Leprosis

lepriasis.

Leprosy.

Descriptions have been given with too little discrimination both in ancient and modern times.

Bateman fully sensible of this.

Description of this and various cognate diseases in the Levitical code exact and admirable.

Three of them distinctly belong to the present species:

Berat,  
Boak, and  
Tso rat.

\* Vol. II. p. 852.

† Levit. Cap. XIII.

‡ Id. Cap. XIII, 38, 39.

§ Id. v. 3.

|| Id. v. 6. 8.

## GEN. IV.

## SPEC. II.

Leprosis

leprosis.

Leprosy.

The same

three

equally

noticed and

described by

Arabic and

Greek

writers, but

with much

confusion

of terms

and sym-

ptoms.

Boak a

slighter

and un-

contami-

nating

berat :

the boak of

the Arabi-

ans and

alphos of

the Greeks.

Berat lebut

of the

Hebrews

the beras

bejas of the

Arabians.

The beras

cechut of

the He-

brews ;

the Arabian

beras asved,

the melas

of the

Greeks.

Whence

the existing

confusion

has arisen.

Kouba of

the Arabi-

ans its real

range and

import :

included

the genus

psoriasis as

well as

lepidosis.

The Arabic and Greek writers, have in fact taken notice of and described all these, but with so much confusion of terms and symptoms, from causes I will presently point out, that without thus turning back to the primary source it is difficult to unravel them or understand what they mean.

The boak, or slighter and uncontaminating berat, is still denominated by the same name among the Arabians,

BOAK (بعان), and is the λέπρα Αλφός or “dull-white leprosy” of the Greeks : while the bright-white and dusky berats of the Hebrews, which the latter distinguished on account of their malignity by the name of צרעת (*tsorat*), are still called among the Arabians by the Hebrew generic term with a very slight alteration; for the berat *lebena* (כחרת לבנה) or bright-white berat of the Hebrew tongue, is the beras *bejas* (برص بيض) of the Arabic, and the berat *cecha* (כחרת כהה) or dusky berat its beras *asved* (برص اسود): the former of these two constituting the λέπρα Λευκή or “bright-white” leprosy of the Greeks, and the latter their λέπρα μέλας “dusky or nigrescent leprosy.”

So far the whole seems to run in perfect harmony: but as many of the Arabians, in process of time, used boak and beras indiscriminatively, the different species of the disease as well as their qualities became immediately confounded, and we are told sometimes that leprosy is, and at other times that it is not unclean or contagious.

And what increased the confusion is that the Arabians employed also another term of still wider import than either of these being قوبا (*kuba* or *kouba*), which imported scaly eruptions of every kind, running not merely parallel with the entire genus *LEPIDOSIS* before us, but something beyond, so as to include the humid as well as the dry scall; and consequently diseases of very different qualities and degrees of malignancy, contagious and uncontagious, cuticular and ulcerative. It is a term peculiarly common to the writings of Avicenna and Serapion. And

as kouba, or with the article alkouba was also frequently applied to all the species of beras or leprosy, the real characters of the latter were rendered doubly doubtful and intricate. And hence a very obvious source of confusion upon this subject originating among the Arabians.

But while the Arabian writers borrowed two terms appropriated to the disease before us from the Hebrew tongue, beras and boak, and employed both of them in a loose and indefinite manner, the Greeks themselves borrowed one and employed it still more indeterminately: for from the Hebrew צֶרַע (tsorat) they obtained their ψώρα (psora)—as our own language has since the word SORE. Tsorat, as we have already seen, is restrained by

the Hebrew legislator to the two forms of beras or leprosy which were contagious or rendered a man unclean: and as the Greeks introduced this term into their own tongue it would have been better to have restrained it to the same import, and to have used psora as the translation of tsorat. But the Greeks had the word lepra already by them, as significative of the same disease *generally*, or a synonym of berat or beras; and hence instead of psora they employed lepra which is the word made use of in the Greek, as well as in the Latin versions.

As lepra, however, is a generic term and runs parallel with berat, so as to include the boak or uncontaminating, as well as the contaminating forms of the disease, the clearness, if not the entire sense, of the Hebrew is greatly diminished in the Greek version. When we are told by Moses, in the language of the *Hebrew* bible, that the priest shall examine the berat, or bright spot, accurately, and if it have the specific marks, it is a TSORAT, (which the berat is not necessarily,) we readily understand what he means. But when he tells us in the language of the *Greek* bible, that the priest shall look at the berat or τηλαυγής (which is itself necessarily a lepra) and if it have the specific marks it is a LEpra, the meaning, to say the least of it, is obscure and doubtful. It is probable, however, that psora, when first introduced into the Greek tongue,

GEN. IV.  
SPEC. II.  
Lepidosis  
leprasis.  
Leprosy.

And was applied to all the species of beras or leprosy.

While the Arabians borrowed berat and boak from the Hebrew and used them loosely, the Greeks from the Hebrew tsorat, borrowed psora, as the English have sore:

and used it with greater looseness, signifying not lepra as among the Hebrews, but a crustaceous and pustulous disease.

Proof of confusion hence arising illustrated.



GEN. IV.  
SPEC. II.  
Lepidosis  
lepriasis.  
Leprosy.

imported the very same idea as in the Hebrew : but it soon gave way to the older term of lepra, and having thus lost its primitive and restricted signification, it seems to have wandered in search of a meaning, and had at different times, and by different persons, various meanings attributed to it; being sometimes used to express scaly eruptions generally, sometimes the scales of leprosy; but at last and with a pretty common assent the far slighter efflorescence of scaly tetters or scalls, denominated in the Levitical code saphat (ספחת) : and by the Latins scabies or impetigo *sicca* : constituting the PSORIASIS, or ensuing species of the present classification. So that whilst in Hebrew, or under its primitive sense, tsorat or psora denoted the most malignant form of lepidosis, in Greek or under its secondary sense, it denoted one of the mildest forms of the same. And hence, another source of confusion upon the subject before us originating among the Greek writers, as the preceding originated among the Arabian.

Another source of perplexity from the use of lepra in the sense of elephantiasis.

Order attempted to be restored by Actuarius, but without effect;

And when to these two sources of perplexity we add that the Greek term lepra was, from a cause I have formerly explained, employed equally to express elephantiasis, we shall easily be able to account for the indefinite and incoherent descriptions of all these diseases which are given by many of the Greek and Arabian writers, and the inaccuracy with which the symptoms of one specific disease are run into another. Actuarius endeavoured to throw something of order into the midst of this confusion by contemplating all these maladies, in conjunction with lichen, as different forms of a common genus, and dividing them into four separate species: "A less violent disease," says he, "than elephantiasis is lepra; lepra is, however, more violent than psora, and psora than the lichenes. But lepra penetrates deep, forms circular eruptions and certain funguses or deliquescences of flesh (τινὰς σύντηξις σαρκὸς) and throws off scales from which also it derives its name: while psora is more superficial, assumes indeterminate shapes, and only casts off furfuraceous corpuscles.

A roughness and itching of the skin is common to both\*." And to the same effect Paulus of Ægina.

The real fact is, that the two last are nearly connected in nature, and in the present work follow in immediate succession, while both are widely remote from the first; and though it is possible they have occasionally terminated in it, are by no means naturally connected with it, or form a necessary harbinger.

Lepra or lepriasis in Celsus occurs under the name of vitiligo, and like the berat of the Hebrew legislator, is made to include three modifications; the ordinary forms of it, indeed, that have descended to us, though delineated with much error and incongruity. The description of Celsus is drawn up with peculiar accuracy and concinnity, and makes the nearest approach to that of Moses of any I am acquainted with: and by uniting them and combining a few well ascertained symptoms from other authors, we shall be able to obtain a pretty clear insight into the genuine characters of these modifications, freed from the extraneous concomitants that have so often bewildered us.

GEN. IV.

SPEC. II.

Lepidosis

lepriasis.

Leprosy.

as some of the diseases he wished to connect are essentially remote from each other.

The vitiligo of Celsus runs parallel with the berat of the Hebrews, and the description is drawn with peculiar accuracy: and both accounts concur in the following varieties:

α Albida.

Boak (בהק) Hebr.

Boak (بعاق) Arab.

Alphos. (Ἀλφός) Auct.

Gr. Cels.

Common or dull-white leprosy.

Scales glabrous, dull-white, circular and definite; preceded by reddish, and glossy elevations of the skin; surrounded by a dry, red, and slightly elevated border: scattered; sometimes confluent: irregularly exfoliating and reproduced: rarely found on the face: not contagious.

\* Actuar. De Meth. Medend. II. 11.

And compare Paul Ægin. IV. 2.

Serapion. Breviar. Tr. v. Cap. IV.

Avicenn. Lib. I. III. 1.

GEN. IV.  
SPEC. II.  
Lepidosis  
lepriasis.  
Leprosy.

- 6 Nigricans. Scales glabrous, dusky or livid,  
Berat cecha; Hebr. without central depression,  
(בהרת כהה) patches increasing in size;  
Beras asved, Arab. scattered, or confluent.  
(برص اسود) Contagious.  
Melas (Μέλας) Auct.  
Gr. Cels.  
Dusky or black  
leprosy.

- 7 Candida. Scales on an elevated base  
Berat lebena. Hebr. glossy-white, with a deep  
(בהרת לבנה) central depression; encir-  
Beras bejas. Arab. cled with a red border;  
(برص بياض) patches increasing in size:  
Leuce (Λευκή). Auct. hairs on the patches white  
Gr. Cels. or hoary; diffused over the  
Bright-white leprosy. body. Contagious.

All these, at least in their origin, are strictly cutaneous affections: though we shall presently have to observe that the last two when they become inveterate, sometimes seem to affect the habit; and it is hence possible that the first may do so in a long course of time if neglected.

α L. Lepri-  
asis albida.  
Common or  
dull-white  
leprosy.

It is on this account that the boak, common or DULL-WHITE LEPROSY has hence been regarded as in every instance a constitutional malady by many writers of recent times; but it was not so regarded either by the best Greek and Arabian physicians, who also duly distinguished it from elephantiasis and other complaints with which it has been confounded by later writers; nor is it so regarded by Dr. Willan, who ascribes it chiefly to cold, moisture, and the accumulation of sordes on the skin, especially in persons of a slow pulse, languid circulation, and a harsh, dry, and impermeable cuticle: or whose diet is meagre and precarious. It is hence found chiefly in this metropolis among bakers and bricklayers' labourers: coal-heavers, dustmen, laboratory-men, and others who work among dry,

powdery substances, and are rarely sufficiently attentive to cleanliness of person.

In the common, and, perhaps, in all the varieties, the scaly patches commence where the bone is nearest to the surface, as along the skin about the elbow, and upon the ulna in the fore-arm, on the scalp, and along the spine, os ilium, and shoulder-blades. They rarely appear on the calf of the leg, on the fleshy part of the arms, or within the flexures of the joints. Both sides of the body are usually affected at the same time and in the same manner; but, contrary to the erysipelatous erythema and some other maladies of the skin, the parts first affected do not run through their action and heal as other parts become diseased, but continue with little alteration, till, from medical application or the natural vigour of the constitution, returning health commences; when all the patches assume a like favourable appearance at the same time, those nearest the extremities, and where the disease, perhaps, first showed itself going off somewhat later than the rest. The scaly incrustations sometimes extend to the scalp, and a little encroach on the forehead and temples; but it is very rarely that they spread to the cheeks, chin, nose, or eyebrows. The eruption is seldom attended with pain or uneasiness of any kind, except a slight degree of itching when the patient is warm in bed, or of tingling on a sudden change of temperature in the atmosphere.

We have said that this variety is strictly a cutaneous eruption, and rarely, if ever, affects the constitution. It is in consequence regarded as of but little importance in the Levitical code, which contemplates it as not penetrating below the skin of the flesh, and not demanding a separation from society. "If a man or a woman," says the Jewish law, "have in *the skin of their flesh* a berat, a white berat, then the priest (who after the manner of the Egyptians united the character of a physician with his own,) shall look; and, behold, if the berat in the skin of the flesh be dull, it is a BOAK *growing in the*

GEN. IV.  
SPEC. II.

α L. Lepri-  
asis albidā.  
Common  
or white  
leprosy.  
History of  
the disease.

Progress,

and ter-  
mination.

This variety  
strictly  
cutaneous  
and of little  
importance.

Illustrated  
from the  
Levitical  
account;



GEN. IV.  
SPEC. II.  
a L. Lepri-  
asis albida.  
Common  
or white  
leprosy.  
and from  
Celsus.

*skin*: he is clean\*.” Not essentially different Celsus, “the vitiligo, though it brings no danger, is, nevertheless, offensive, and springs from a bad habit of body. The dull-white and the dusky forms in many persons spring up and disappear at uncertain periods. The bright-white when it has once made its attack, does not so easily quit its hold. The cure of the two former is not difficult: the last scarcely ever heals†.”

Hence manifestly not contagious.

Opinion of Willan.

Though lazarettoes are often abroad allotted to all the varieties, the present is often regarded as not contagious. Illustrated in the Barbary states.

We may hence distinctly affirm that the variety of the dull-white or common leprosy, is not contagious: and had it been so among the Jews, Moses would have condemned the patient to a quarantine under this form, as well as under the two ensuing. Dr. Willan, indeed, yielding to the general opinion upon this subject, derived from a proper want of discriminating one form of the disease from another, inclines to believe that it may occasionally become in time so interwoven with the habit as to be propagable, but still rejects the idea of its being contagious. In reality, although in most countries where leprosy is a common malady, places of separate residence are usually allotted to those who are affected with it under whatever modification it may appear, this has rather been from an erroneous interpretation of the Jewish law, and an ignorance of the exceptions that are introduced into it. The lepers of Haha, a province in the Barbary states, though banished from the towns, are seen in parties of ten or twenty together, infesting the roads, and approach travellers to beg charity. In Morocco they are confined to a separate quarter, or banished to the outside of the walls. They are, according to Mr. Jackson, but little disfigured by the disease, except in the loss of the eyebrows, which the females endeavour to supply by the use of lead-ore; while they give an additional colour to their complexion by the assistance of al akken or rouge.

\* Levit. Cap. XIII. 38, 39.

† De Medicinâ, Lib. v. Cap. XXVIII. Sect. 19.

In like manner, Niebuhr asserts that one of the species of leprosy to which the Arabs are subject, is by them still called Boak; but that is neither contagious nor fatal. Upon which remark his annotator M. Forskâl adds, "the Arabs call a sort of leprosy in which various spots are scattered over the body Behaq; which is without doubt the same as is named בהק (bohak or behaq) in Lev. xiii. They believe it to be so far from contagious that one may lie with the person affected without danger.—On May 15, 1763," says he, "I saw at Mokha a Jew who had the leprosy bohak. The spots are of unequal size: they do not appear glossy; they are but little raised above the skin, and do not change the colour of the hair: the spots are of a dull-white inclining to red \*."

GEN. IV.  
SPEC. II.  
α L. Lepri-  
asis albida.  
Common  
or white  
leprosy.  
Among  
other tribes.

Boak  
described  
by Forskâl  
at Mecca.

The NIGRESCENT LEPROSY forming the second variety, is improperly called *black*, though it was so named by the Greeks. The colour, as repeatedly described by the Jewish legislator, is rather obscure, darkling, or dusky. The term is כהה (cecha) whence the Latin cæcus: and it immediately imports obfuscous, or overcast with shade or smoke. The character in Celsus is in perfect accordance with this, as he explains to us that μέλας, or niger, in its application to this variety imports "umbræ similis," "shade-like," or "shadowed." The hue is tolerably represented in Dr. Willan's plate, but better in Dr. Bateman's in which it has been retouched. The natural colour of the hair, which in Egypt and Palestine is black, is not changed, as we are repeatedly told in the Hebrew code, nor is there any depression in the dusky spot; while the patches, instead of keeping stationary to their first size, are perpetually enlarging their boundary. The patient labouring under this form was pronounced unclean by the Hebrew priest or physician, and hereby sentenced to a separation from his family and

ε L. Lepri-  
asis nigri-  
cans.  
Dusky or  
black le-  
prosy.  
How de-  
scribed in  
the Leviti-  
cal code.  
Character  
by Celsus.

Hair on the  
scall not  
changed in  
colour.

\* Reisebeschreibung nach Arabien und andern unliegenden Ländern.  
Band. I. Kopenhag. 4to. 1774.

GEN. IV.  
SPEC. II.  
L. Lepri-  
asis nigri-  
cans.  
Dusky or  
black le-  
prosy.

A severer  
than the  
preceding  
variety, but  
less so than  
the subse-  
quent.  
Its charac-  
ter as it ap-  
pears in  
our own  
country.

Greater  
predisposi-  
tion to all  
the vari-  
eties of  
leprosy in  
hot than in  
cooler  
climates.

γ L. Lepri-  
asis candida  
Bright-  
white le-  
prosy.  
Pathogno-  
mics as  
pointed out  
in the Levi-  
tical law.

Several of  
these taken  
separately  
belong to  
other blem-  
ishes:  
when all  
must have  
concurrent

friends: and hence there is no doubt of its having proved contagious. Though a much severer malady than the common leprosy, it is far less so than the leuce or third variety: and on this account is described more briefly in the Hebrew canon. In our own quarter of the world the exfoliated surface in the nigrescent or dusky leprosy remains longer without new scales, discharges lymph, often intermixed with blood, and is very sore. When it covers the scalp it is particularly troublesome. With us it is chiefly found among soldiers, sailors, sculler-men, stage-coachmen, brewers' labourers, and others, whose occupations are attended with much fatigue, and expose them to cold and damp, and to a precarious or improper mode of diet. For the same reason women habituated to poor living, and constant hard labour, are also liable to this form of the disease.

In consequence of the increased excitement and irritability of the skin in the hot and sandy regions of Egypt and Palestine, there is, however, a far greater predisposition to leprosy of all kinds, than in the cooler temperature of Europe. And hence, under the next variety, we shall have occasion to observe, from the Levitical account, that all of them were apt to follow upon various cracks or blotches, inflammations or even contusions of the skin.

The BRIGHT-WHITE LEPROSY, is by far the most serious and obstinate of all the forms which the disease assumes. The pathognomic characters dwelt upon by the Hebrew legislator in deciding it are, "a glossy-white and spreading scale upon an elevated base, the elevation depressed in the middle but without a change of colour, the black hair on the patches which is the natural colour of the hair in Palestine, participating in whiteness, and the patches themselves perpetually widening their outline." Several of these characters taken separately belong to other lesions or blemishes of the skin as well, and therefore none of them were to be taken alone: and it was only when the whole of them concurred that the Jewish priest, in his capacity of phy-

sician, was to pronounce the disease a tsorat (צֶרַעַת) or malignant leprosy. We have said that in lepriasis, the rete mucosum, or colorific adipose layer of the skin is peculiarly affected, and we have here a still more distinct proof of this assertion in the change of the hair, the colour of which is derived from this material. This change is produced by the barter of a black for a white colouring material, probably a phosphate of lime, which gives also the bright glossy colour, not hoary or dull, to the scaly patches; and which in ichthyiasis, forming the fourth species of the present genus, we shall find is occasionally deposited on the surface in prodigious abundance.

Common as this form of leprosy was among the Hebrews, during and subsequent to their residence in Egypt, we have no reason to believe it was a family complaint or even known amongst them antecedently: and there is hence little doubt, notwithstanding the confident assertions of Manetho to the contrary, that they received the infection from the Egyptians instead of communicating it to them. Their subjugated and distressed state, however, and the peculiar nature of their employment, must have rendered them very liable to this as well as to various other blemishes and misaffections of the skin: in the production of which there are no causes more active or powerful than a depressed state of body and mind, hard labour under a burning sun, the body constantly covered with the excoriating dust of brick-fields and an impoverished diet; to all of which the Israelites were exposed whilst under the Egyptian bondage.

It appears also, from the Mosaic account, that in consequence of these hardships there was, even after they had left Egypt, a general predisposition to the tsorat or contagious forms of leprosy, so that it often occurred as a consequence of various other cutaneous affections; sometimes appearing as a berat *lebena* (לִבְנָה, בְּחֶרֶת), or bright-white leprosy, and sometimes as a berat *cecha* (בְּחֶרֶת כְּחָה), dusky leprosy, according to the peculiar habit or idiosyncrasy. The cutaneous blemishes

GEN. IV.  
SPEC. II.  
γ L. Lepri-  
asis candi-  
da.  
Bright-  
white le-  
prosy.

in forming  
a psorat or  
malignant  
leprosy.

Leprosy  
probably  
received by  
the He-  
brews from  
the natives  
of Egypt.

Predispo-  
nent causes:

producing a  
chronic  
predisposi-  
tion.

Lesions and  
blemishes  
suspected  
as har-  
bingers,



GEN. IV.  
SPEC. II.  
γ L. Lepri-  
asis candi-  
da.  
Bright-  
white le-  
prosy.

or blains which had a tendency to terminate in leprosy, and which were consequently watched with a suspicious eye from the first, are stated by Moses to have been the following :

- |                          |  |
|--------------------------|--|
| 1. Saat (שאת) *          | Herpes, or tetter, <i>δουλῆ</i> , Sept.<br>an irritated cicatrix.  |
| 2. Saphat (ספחת) †.      | Psoriasis, or dry scall.—<br>Dry sahafata ( <i>سحافة</i> ).<br>Arab.   |
| 3. Netek (נתק) ‡.        | Porrigo, or humid scall.<br>Porrigo. Lat. vers. Jun.<br>et Tremel. Moist saha-<br>fata ( <i>سحافة</i> ). Arab. |
| 4. Berat (ברחת) §.       | Leuce, bright-white scale :<br>the critical sign of con-<br>tagious leprosy.                                   |
| 5. Boak (כהק)   .        | Alphos, dull-white scale :<br>the critical sign of un-<br>contagious leprosy.                                  |
| 6. Nega (נגע) ¶.         | Ictus, blow or bruise: <i>ἄφῆ</i> ,<br>Sept.   |
| 7. Shechin (שחין) **.    | Furunculus, or boil, as in<br>Job, ii. 7.  |
| 8 Mecutash (מכות אש) ††. | Anthrax, or carbuncle : li-<br>terally “a fiery inflam-<br>mation.”  |

And hence  
by law pro-  
fessionally  
examined  
on their ap-  
pearance :  
mode of ex-  
amination  
and its con-  
sequences.

On the appearance of any one of these affections upon a person he was immediately brought before the priest for examination. If the priest perceived that in connec-

\* Levit. cap. xiii. 2, 10, 19, 43.

† Id. v. 2, 6, 7, 8.

‡ Id. v. 30, 31.

§ Id. v. 2, et sæpe alibi.

|| Id. v. 39.

¶ Id. v. 29, 42.

\*\* Id. v. 18.

†† Id. v. 24.

tion with such blemish there were the distinctive signs of a tsorat or contagious leprosy, as a bright glossy and squamous surface, with a depression in the middle, and white hairs, the person was immediately declared unclean and is supposed to have been sent out of the camp to a lazaretto provided for the purpose. If the priest had any doubt upon the subject, the person was put under domestic confinement for seven days, when he was examined a second time; and if in the course of the preceding week the eruption had subsided and discovered no tendency to the above distinctive characters, he was discharged at once. But if the eruption were stationary, and the result still doubtful, he was put under confinement for seven days more: at the expiration of which, on a third examination, the nature of the disease always sufficiently disclosed itself; and he was either sentenced to a permanent separation from the community, or pronounced clean, and set at liberty.

These doubtful cases, as we have just noticed, sometimes superinduced the bright-white, and sometimes the dusky leprosy, apparently according to the particular constitution of the skin, or of the habit generally. And we are further told that there were two ways in which the disease, and particularly the severest or bright-white form of it, terminated;—a favourable and an unfavourable. If it spread over the entire frame without producing any ulceration, it lost its contagious power by degrees; or, in other words, run through its course and exhausted itself. In which case, there being no longer any fear of further evil either to the individual himself or to the community, the patient was declared clean by the priest, while the dry scales were yet upon him, and restored to society\*. If, on the contrary, the patches should ulcerate, and quick or fungous flesh (כֶּשֶׁר הִי) †, spring up in them, the priest was at once to pronounce it an inveterate leprosy ‡; a temporary confinement was

GEN. IV.  
SPEC. II.  
γ L. Lepri-  
asis candi-  
da.  
Bright-  
white le-  
prosy.

These pre-  
cursors  
sometimes  
excited the  
leuce and  
sometimes  
the melas,  
according  
to the pec-  
uliarity of  
the consti-  
tution.

Both termi-  
nated in two  
ways: a  
favourable,  
in which it  
lost its con-  
tagious  
powers,  
after having  
run its  
course:  
and an un-  
favourable,  
terminating  
in fungous  
ulcerations.

\* Levit. cap. xiii. v. 12, 13.

† Id. v. 10, 14, 15.

‡ Id. v. 11.

GEN. IV.  
SPEC. II.  
γ L. Lepri-  
asis candi-  
da.  
Bright-  
white le-  
prosy.

This termi-  
nation con-  
firmed by  
Actuarius.

Beyond this  
nothing in  
the Mosaic  
account  
that ap-  
proximates  
it to ele-  
phantiasis,  
the peculiar  
symptoms  
of which  
are not  
even  
glanced at.

declared to be totally unnecessary, and he was regarded as unclean for life. The accuracy with which this second termination is described, is fully confirmed by the passage quoted already, but for another purpose from Actuarius, and it is curious to observe how closely they coincide. "The lepra," says the latter, speaking of it in its worst form, "penetrates deep, forms circular eruptions and certain funguses or deliquescences of flesh." But we meet with nothing in the Mosaic account that approximates it to elephantiasis: nothing of a thick, rugose, livid tuberculate, and, particularly, an insensible skin; nothing of fierce and staring eyes, hoarse, and nasal voice, or of a general falling off of the hair. And hence we have additional proof that these maladies were distinct, and unconnected. This malignant state of the disease, however, is still generally called after the Greek misnomer elephantiasis: and the two maladies in consequence hereof are to this hour confounded in the Greek islands, and even as far north as Iceland, the *ultima Thule* to which the literature of the Greeks has travelled: but we have sufficient proof in all these cases, from some of the best travellers of the present day, that the disease thus described is not the tubercular or thick-legged elephantiasis, but the above malignant form of genuine leprosy. Thus, Mr. Jowett, in his very interesting "Christian Researches in the Mediterranean," in describing the beautiful, but now, from its political reverses, most pitiable island of Haivali or Kydonia, near Scio, "a little farther on is the hospital for lepers: it was founded by a leper. Elephantiasis is no uncommon disorder in these parts: its effects are very offensive. I saw poor men and women with their fingers or legs literally *wearing or wasting away*\*:"—forming a character directly opposite to what occurs in proper elephantiasis; where the limbs, though they continue to crack, continue to thicken enormously, even to the moment of separation. Dr. Henderson, on the contrary, while describing the real

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\* Christian Researches in the Mediterranean, p. 65, 8vo, 1822.

elephantiasis in Iceland, calls it the Jewish leprosy, and offers a sort of apology for Moses that he "has not noticed the very striking anæsthesia, or insensibility of the skin \*," which, continues he, "is an inseparable attendant of the genuine elephantiasis." The direct answer is that Moses delineates a different disorder and one in which no such symptoms exist.

GEN. IV. .  
SPEC. II.  
y L. Lepri-  
asis candi-  
da.  
Bright-  
white le-  
prosy.

As leprosy, except in its less common and contagious modifications, has always been accounted a blemish rather than a serious disease in the East, the art of medicine has rarely, in that quarter, been gravely directed towards it, save in the use of the oxyde of arsenic, which is by far the most efficacious of every remedy that has hitherto been tried in any quarter. I have already had occasion to notice the preparation and proportion of this mineral, employed from time immemorial, in treating of elephantiasis, for which disease, also, it is in common use: and the reader may turn to the passage at his leisure. But, with the exception of arsenic, the remedies proposed by the Asiatics are trifling and little worthy of notice.

Medical  
science not  
often turn-  
ed to its  
cure in the  
East with  
much seri-  
ousness, ex-  
cept in the  
use of arse-  
nic.

In Europe the mode of treatment has, indeed, been far more complicated, but I am afraid not much more skilful or successful: consisting, till of late years, of preparations quite as insignificant as any that occur in the Arabian writers, and often highly injurious by their stimulating property. Of the insignificant the simplicity of modern practice has banished by far the greater number: and it is now, perhaps, hardly known to the general, or even to the medical botanist, that *meadow scabious*, and several other species of the same genus were so denominated from their being supposed, when employed as a wash in the form of decoction, to possess an almost specific virtue against leprosy, itch, and almost every other kind of foul and scabious eruption.

Treatment  
in Europe  
till of late  
futile and  
insignifi-  
cant.

Warm bathing, simple or medicated; and this fre-

Warm-  
bathing.

\* Iceland; or, the Journal of a Residence in that Island.



GEN. IV.  
SPEC. II.  
Lepidosis  
leprosis.  
Leprosy.  
Treatment.

Sulphure-  
ous baths.

Tar oint-  
ment.  
Solution of  
sublimate.

Solanum  
Dulcamara.

Ulmus cam-  
pestris.

quently repeated, is advantageous to all the varieties; for it tends to remove the scales, soften the skin, and excite perspiration. In the nigrescent leprosy, which proceeds chiefly from poor diet in connexion with sordes, the bath should be of pure fresh water, and the remainder of the cure will generally, in such case, depend upon a better regimen, and general tonics. In the other varieties, when they occur among ourselves, the sulphureous waters of Harrowgate, Croft, and Moffat, whether applied externally or internally, seem frequently to prove more efficacious. As external applications, most benefit appears to be derived from the tar-ointment, as employed by Dr. Willis, and a dilute solution of sublimate, or the unguentum hydrargyri nitrati, as recommended by Dr. Willan. These medicines should be applied to the skin, and the former of them be well rubbed in upon the parts affected every night, and carefully washed off the next morning with warm water, or a slight alkaline lotion.

As internal medicines the most useful seem to have been the solanum *Dulcamara*, and ledum *palustre*, in decoction or infusion. Dr. Crichton strongly recommends the former, and speaks in high terms of its success. I have not been so fortunate in the trials I have given it. The ledum in Sweden\*, and, indeed, over most parts of the north of Europe, as high up as Kam-schatka, has long maintained a very popular character, and the form of using it is thus given by Odhelius in the Stockholm Transactions for 1774. Infuse four ounces of the ledum in a quart of hot water; strain off when cold; the dose from half a pint to a quart daily.

The bark of the ulmus *campestris* or elm-tree, has also been warmly recommended by various writers, for this, as well as numerous other cutaneous eruptions; and, in connexion with more active medicines, appears to

\* Linnæus, Diss. de Ledo palustri. Upsal, 1775.

Abhandl. der Königl. Schwed. Academie der Wissenschaften. Band. xlii.  
p. 194.

have been of some use, but it is feeble in its effect when trusted to alone. Its form is that of a decoction, two ounces to a quart of water : the dose half a pint morning and evening\*.

The *cenanthe crocata*, or hemlock drop-wort, is another plant that has been recommended in obstinate and habitual cases of this kind; and there are unquestionable examples of its having produced a beneficial effect. Dr. Pulteney has especially noticed its success in a letter to Sir William Watson. The herb, however, is one of the most violent poisons we possess in our fields, and when mistaken for wild cellery, water-parsnip, or various other herbs, has frequently proved fatal a few hours after being swallowed, exciting convulsions, giddiness, lock-jaw, violent heat in the throat and stomach, and sometimes sickness, and purging: and where the patient has been fortunate enough to recover, it has often been with a loss of his nails and hair. Goats, however, eat it with impunity, though it is injurious to most other quadrupeds. As a medicine, it is given in the form of an infusion of the leaves : though sometimes the juice of the roots has taken the place of the leaves. Three tea-spoonfuls of the juice is an ordinary dose, which is repeated every morning.

But by far the most active and salutary medicine for every form of leprosy, in Europe as well as in Asia, is arsenic. I have already adverted to its common use in the latter quarter, and at home, in the form of the College solution, it has often been found to succeed, when every other medicine has been abandoned in despair. The ordinary dose is five minims twice or even three times a-day, increased as the stomach will allow.

GEN. IV.  
SPEC. II.  
Lepidosis  
lepriasis.  
Leprosy.  
Treatment.  
*Cenanthe*  
*crocata*.

Arsenic.

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\* Medical Transactions, Vol. II. p. 203.

## SPECIES III.

## LEPIDOSIS PSORIASIS.

## Dry Scall.

PATCHES OF ROUGH, AMORPHOUS SCALES; CONTINUOUS,  
OR OF INDETERMINATE OUTLINE; SKIN OFTEN CHAPPY.

GEN. IV.  
SPEC. III.  
Origin of  
generic  
term,  
which was  
formerly  
used in a  
different  
sense.

Proper root  
the Hebrew  
tsorat.

How de-  
rived by the  
lexicogra-  
phers.

PSORIASIS is a derivation of ψώρα, "scabies, asperitas," with a terminal ιτις, as in the preceding species. The primary tem ψώρα, or psora, was used in very different senses among the Greek writers from a cause I have already explained under LEPRIASIS, where it has been shown that the real radical is the Hebrew term צרע (tsora), "to smite malignantly, or with a disease," whence צרעת (tsorat), imports the leprosy in a malignant or contagious form, but not in an uncontagious. The lexicographers not hitting upon the proper origin of ψώρα have supposed it to be derived from ψάω (psao), which means, however, unfortunately "tergo, detergo," "to cleanse, purify, or deterge,"—instead of "to pollute:" but as one way of cleansing is by scraping, and, as persons labouring under psora scrape or scratch the skin on account of its itching, the difficulty is supposed to be hereby solved, and psora is allowed to import derivatively, what, upon this explanation, it opposes radically.

The actual origin of the term, however, is of little importance. It was mostly employed by the Greek writers, and has been very generally so in modern times to import a dry scall or scale, for the terms are univocal, the Saxon sceala or scala being the origin of the former, and denoting the latter, of a rough surface and indeterminate outline, as expressed in the specific definition.

Its present  
use.

Psoriasis, as thus interpreted, is the dry Sahafati (سَهْفَاتِي) of the Arabian writers, the סַפְחַת Saphat of the Levitical code, as already explained; the Arabic being derived from the Hebrew root. It embraces the following varieties:

- |  |  |
|--|--|
| α Guttata.<br>Guttated dry scall.      | Drop-like, but with irregular margin. In children contagious.  |
| ε Gyrata.<br>Gyrated dry scall.        | Scaly patches in serpentine or tortuous stripes. Found chiefly on the back, sometimes on the face.   |
| γ Diffusa.<br>Spreading dry scall.     | Patches diffuse, with a ragged, chopped, irritable surface: sense of burning and itching when warm: skin gradually thickened and furrowed, with a powdery scurf in the fissures. Extends over the face and scalp.  |
| δ Inveterata.<br>Inveterate dry scall. | Patches continuous over the whole surface; readily falling off and reproducible with painful, diffuse excoriations. Extend to the nails and toes, which become convex and thickened. Found chiefly in old persons. |
| ε Localis.<br>Local dry scall.         | Stationary and limited to particular organs  |

GEN. IV.  
SPEC. III.  
Lepidosis  
Psoriasis.  
Dry Scall.  
Synonymous with the dry Sahafati of the Arabians.

In the FIRST OR GUTTATED VARIETY, the patches very seldom extend to the size of a sixpence; and are distinguished from those of leprosy by having neither an elevated margin nor an elliptic or circular form, often spreading angularly, and sometimes running into small serpentine processes. The eruption commences in the spring mostly on the limbs, and appears afterwards distributed over the body, sometimes over the face. It

α L. Psoriasis guttata.  
Guttated dry scall.  
Description.



GEN. IV.  
SPEC. III.  
α L. Psori-  
asis guttata.  
Guttated  
dry scall.

subsides by degrees towards the autumn, and sometimes reappears on the spring ensuing.

In children, probably from the greater sensibility of their skin, this variety of scall spreads often with great rapidity, and is scattered over the entire body in two or three days.

ε L. Psori-  
asis gyrata.  
Gyrated  
dry scall.  
Descrip-  
tion.

The SECOND OR GYRATED VARIETY runs in a migratory course, and apes the shape of earth-worms or leeches when incurvated, with slender vermiform appendages. Not unfrequently the two ends meet, and give the scall an annulated figure like a ring-worm, particularly about the upper part of the shoulders or on the neck, in which case they are sometimes confounded with shingles or some other modification of herpes.

γ L. Psori-  
asis diffusa.  
Spreading  
dry scall.  
Descrip-  
tion.

The SPREADING SCALL commences commonly on the face or temples, as the first of the preceding does on the extremities, and the second on the back. It is sometimes confined to a single patch, which nevertheless, is occasionally to be seen in some other part, as the wrist, the elbow-joint, breast, or calf of the leg. It is often obstinate and of long duration, and has been known to continue for a series of years: in which cases, however, there is usually an aggravation or extension of it at the vernal periods. It is at times preceded by some constitutional affection; and at times seems to produce the same. When limited to the back of the hand this, like some other forms of lepidosis, is vulgarly called the *Baker's Itch*. On the hands and arms, and sometimes on the face and neck, it is peculiarly troublesome to washer-women; probably from the irritation of the soap they are continually making use of.

Baker's  
Itch.

δ L. Psori-  
asis invete-  
rata.  
Inveterate  
dry scall.  
Descrip-  
tion.

The inveteracy of the FOURTH VARIETY seems principally to spring from the general torpitude and want of power in the class of persons whom it chiefly attacks, which is those who are in the decline of life. It is accompanied with painful excoriations, in many instances occasioned by the pressure of some parts of the clothing against the sores, or by the attrition of contiguous surfaces, as of the nates, groins, thighs, and scrotum. At

an advanced period of the disease, the cuticle is often still more extensively destroyed; and the extremities, the back and nates have been seen excoriated at the same time, with a very profuse discharge of thin lymph from the surface: after which the discharge itself thickens, from an absorption of the finer parts, and forms a dry, harsh, and almost horny cuticle, which progressively separates in large pieces. At first, this variety intermits in the summer, but at length becomes permanent and intractable.

The LOCAL VARIETY is found chiefly on the lips, eyelids, prepuce, scrotum, and inside of the hands. It is peculiarly common to shoemakers, and artificers in metallic trades, as braziers, tinmen, and silversmiths; probably from filth and the irritation of the substances they make use of.

The DRY SCALL, under one or other of the above forms, is one of the most frequent cutaneous diseases in this kingdom, and the first variety, guttated or drop-scald, psoriasis guttata, is sometimes contagious in irritable skins, and especially among children. Several of these modifications are also found, occasionally, as symptoms or sequels of lues, particularly the first three; but are in every instance distinguishable by the livid or chocolate hue of the scales.

As cutaneous sordes, in connexion with a peculiarity in the constitution of the skin, and especially in connexion with a meagre diet, indolence, and want of exercise, appears to be the general cause of this as well as of many other, perhaps most other, simple cutaneous eruptions, the first principles of a curative intention must consist in washing and softening the skin by warm bathing, regularly persevered in; and in improving the diet, and exciting to a life of more activity. Beyond this the common treatment of psoriasis should be with little exception, that of leprosy: and hence the sulphureous waters of Harrowgate, Croft, Sharpmore, Broughton, Wrigglesworth, and other places, used both externally and internally, will succeed better than common spring or river-

GEN. IV.  
SPEC. III.  
L. Psoriasis inveterata.  
Inveterate dry scall.  
Description.

L. Psoriasis localis.  
Local dry scall.

Common to shoemakers and metallurgical artisans.

The dry scall in one variety or other very common, and in the first sometimes contagious. Often a symptom or sequel of other complaints.

Medical treatment.  
Cleanliness, pure-air, and plain, but nutritive food, warm-bathing:

Sulphureous waters.

GEN. IV.  
SPEC. III.  
Lepidosis  
Psoriasis.  
Dry scall.  
Treatment.

Chalybeate  
waters less  
generally  
useful.

Bleeding  
and repeat-  
ed purges of  
no avail.

water. Chalybeate medicines, and particularly chalybeate waters have been powerfully recommended by Dr. Willis and many others: but, excepting where the disease is combined with a languid circulation, as in the inveterate form, and demands excitement, these do not appear to be of any certain efficacy. Bleeding and the repetition of purgatives are of no avail though a common practice with many, and founded also on the authority of Dr. Willis. "Strong mercurial preparations," observes Dr. Willan, "are of no advantage, but eventually rather aggravate the complaint." Nor do the fresh juices of the alterant plants, scurvy-grass, succory, fumitory, or sharp-pointed dock, appear to be of any material benefit.

Alkalies,  
sulphur,  
alterant  
diet drinks,  
sometimes  
antimoni-  
als or mer-  
curials,  
arsenic  
solution.

A gentle purgative should open the course of medical treatment; to which should succeed an internal use of the fixed alkalies with precipitated sulphur, and decoctions of elm-root, sarsaparilla, sassafras, mezereon, or dulcamara; and where the skin is very dry an antimonial at night, or five grains of Plummer's pill, the compound submuriate mercurial pill of the London College. Yet here, as in the preceding species, the most effectual remedy, in obstinate cases, is the arsenic solution, with an abstinence from fruits, acids, and fermented liquors: under which plan in conjunction with the above regimen, most of the ordinary cases will be found to disappear in about three weeks or a month.

## SPECIES IV.

## LEPIDOSIS ICTHYIASIS.

*Fish-Skin.*

THICK, INDURATED INCRUSTATION ENCASING THE SKIN  
TO A GREATER OR LESS EXTENT; SCALINESS IM-  
PERFECT.

THE specific term is derived from *ἰχθυς*, "piscis" with the terminal adjunct of the preceding species. The word is commonly written, but less correctly ichthyosis, since as I have already observed the suffix *iasis* is by general consent applied to all species appertaining to the genus or tribe of diseases before us.

GEN. IV.  
SPEC. IV.  
Origin of  
specific  
term.

In treating of the genus PAROSTIA\* as well as in various other places, I have had occasion to observe that the calcareous earth which the assimilating powers of the animal frame elaborate from the materials of the food or of the blood, for the use of the bones, to give them increased size and solidity in adolescence, and to maintain their firmness in mature life, is, in many cases, secreted irregularly; sometimes in excess, sometimes in deficiency, and sometimes imperfectly, or without a due proportion of phosphoric acid, and other constituents: while, on the other hand, in the advance of old age, although the secretion may not be much disturbed as to its quantity or quality, in the process of carrying off the waste matter the finer parts alone are removed in consequence of the debility of the absorbents, and the bones become brittle and easily broken.

Pathologi-  
cal expla-  
nation.

In the genus LITHIA we have seen that one of the out-

Analogical  
connexion  
with lithia:



GEN. IV.  
SPEC. IV.  
Lepidosis.  
Icthyiasis.  
Fish-skin.

lets for the discharge of the waste calcareous earth is the kidneys: and that when these are supplied with an excess of earth, or a quantity beyond what the uric acid will hold in solution, it is apt to subside, accumulate, and concrete, and consequently to form calculi.

With paruria erratica.

We have also seen under PARURIA ERRATICA as well as under LITHIA that the excretories of the skin become at times an outlet of the same kind for the removal of calcareous earth, whence the calcareous deposits in gout and the calcareous scurf which is often accumulating on the head of those who perspire much.

Earthy secretion in this species also thrown forth in excess, sometimes so as to encase it, and thicken and harden the integument.

In the disease before us the cutaneous excretories throw forth such an excess of this earthy material that it often encases the entire body like a shell; and the cutis, the rete mucosum, and the cuticle being equally impregnated with it, the order of the tegumental laminæ is destroyed, and the whole forms a common mass of bony or horny corium, generally scaly or imbricate, according as the calcareous earth is deposited with a larger or smaller proportion of gluten, in many instances of enormous thickness, and sometimes giving rise to sprouts or branches of a very grotesque appearance: thus offering to us numerous varieties, of which the following are the chief:

α Simplex.

Simple Fish-skin.

The incrustation forming a harsh papulated or warty rind; hue dusky; subjacent muscles flexible. Sometimes covering the whole body except the head and face, palms of the hands, and soles of the feet.

ε Cornea.

Horny Fish-skin.

The incrustation forming a rigid, horny, imbricated rind; hue brown or yellow; subjacent muscles inflexible. Sometimes covering the entire body including the face and tongue.

γ Cornigera.

Cornigerous Fish-skin.

The incrustation accompanied with horn-like, incurvated sproutings; sometimes periodically shed and reproduced.

GEN. IV.  
SPEC. IV.  
Lepidosis.  
Ichthyiasis.  
Fish-skin.

This indurated incrustation commences with a change in the papillæ of the cutis; which are elongated and enlarged into roundish cones or tubercles, often void of sensation. Some of the scaly papillæ have a short, narrow neck, and broad irregular tops. Sometimes the scales are flat and large, and imbricate or placed like tiling, or the scales on the back of fishes, one overlapping another. They also differ considerably in colour in different instances, and are blackish, brown, or white. The skin, to a very considerable extent, has sometimes been found thickened into a stout, tough leather. In a singular enlargement of the lower extremity produced by a puerperal sparganosis Mr. Chevalier found the thickness of the corium in some parts near a quarter of an inch; which, on being cut into, presented the same grained appearance that is observable in a section of the hides of the larger quadrupeds. Below the coriaceous skin the adipose membrane exhibited an equal increase of substance, and in front of the tibia was not less than an inch and a half thick. Mr. Machin gives a very extraordinary case of ichthyiasis of the same kind, originating, indeed, from a different and unknown cause, which covered the whole body with the exception of the head and face, the palms of the hands, and the soles of the feet. The entire skin formed a dusky, ragged, thick case, which did not bleed when cut into or scarified, was callous and insensible, and was shed annually like the crust of a lobster, about autumn, at which time it usually acquired the thickness of three-fourths of an inch, and was thrust off by the sprouting of a new skin beneath\*. This man

General description.

Striking illustration.

Additional illustration.

\* Phil. Trans. No. 424.

GEN. IV.  
SPEC. IV.  
Lepidosis.  
Icthyiasis.  
Fish-skin.

married, and had a family of six children, all of whom possessed the same ragged covering as himself. The father was twice salivated for the complaint, and threw off the casing each time, as did one of the children during the small-pox; but the disease soon returned on both of them. In the Transactions of the Medico-Chirurgical Society there is a case in which the face alone was exempted from the fish-scale covering\*.

Said to be  
indigenous  
among the  
inhabitants  
of Para-  
guay.

There is a remarkable passage in the *Lettres Edifiantes et Curieuses*, of the Jesuits which intimates that this disease is by no means uncommon among the inhabitants of Paraguay, the words, which have been quoted by M. Buffon and Dr. Willan, are as follows: "Il regne parmi eux une maladie extraordinaire: c'est une espece de Lèpre qui leur couvre tout de corps, et y forme une croûte semblable à des écailles de poisson: cette incommodité ne leur cause aucune douleur, ni meme aucun, autre derangement dans la santé†." There is perhaps no part of the world where we should sooner expect to meet with this, and indeed various other species of squamous or leprous affections of the skin, considering the sultry heat of the atmosphere, the rankness of the perspiration that issues from the bodies of the natives, and their deficiency in personal cleanliness; yet I do not know that the same account has been given by any other travellers, and have looked in vain over Estalla and Dobrizhoffer: nor does this particular incrustation of the skin seem to be prevalent in other inland countries exposed to the same excitements, though most of them exhibit squamous disorders of the surface of some kind or other.

This state-  
ment ex-  
plained.

Often shows  
itself  
locally,

In our own country it often shows itself locally and is restricted to a single limb, as an arm, leg, or soles of the feet, and it has sometimes fixed on a cheek, an interesting figure of which is given in Dr. Bateman's *Delineations*.

Examples of the cornigerous variety, or that in which

\* Trans Medico-Chir. Soc. Vol. ix. p. 52.

† Recueil des Lettres, &c. xxv. p. 122.

the incrustation is accompanied with a sprouting of horns or horn-shaped projections are by no means uncommon.

Sir Everard Home has given two cases in the Philosophical Transactions that occurred within his own knowledge. The patients were women, about the middle of life, or rather later: one had four horns, and the other a single horn. Each of them grew from a cyst which formed gradually, and at last opened spontaneously and discharged "a thick gritty fluid\*." The foreign journals are full of similar accounts, in some of which the horns are of considerable length, mostly growing upon the head, though in a few instances on the back†. In the British Museum is shown us, as a curiosity, a horn of this kind eleven inches long, and two and a half in circumference at the base. It is said to have issued from a wen that formed in the head of a woman, and to have reached its full length in four years.

When these are single they rather perhaps belong to the genus *ECPHYMA*, and particularly the species *verruca* and *clavus*; but they are very frequently connected with a dry furfuraceous or scaly skin, often oozing a calcareous material. A very singular example of this complex modification occurred a few years ago in a Leicestershire heifer which was publicly exhibited, and of which the author presented a description and a drawing to the Royal Society. The whole of the skin was covered with a thick, dry, chalky scurf, often producing an itching; and whenever the skin was scratched, a calcareous fluid oozed from it that soon hardened, and put forth corneous, recurvating excrescences, frequently divaricating, and assuming sometimes a leafy, sometimes a horn-shaped appearance. The back was covered with them; over the forehead and below the dew-lap they hung in some hundreds; many as large as natural horns, and rattling together whenever

GEN. IV.  
SPEC. IV.  
Lepidosis.  
Icthyiasis.  
Fish-skin.  
and is accompanied with a sprouting of horns.  
Exemplified.

Striking example in a Leicestershire heifer.

\* Phil. Trans. Vol. LXXXI. 95.

† Eph. Nat. Cur. Dec. I. Ann. I. Obs. 30.

See also Hist. de la Societe Royale de la Medicine, 1776, p. 316.



GEN. IV.  
SPEC. IV.  
Lepidosis.  
Ichthyiasis.  
Fish skin.  
Medicine of  
little avail.  
How far  
recom-  
mended.

the animal moved. The heifer was otherwise in good health, and secreted the same chalky fluid whatever food it was fed upon.

Medicine has hitherto been found of but little avail under any form of this affection. Dr. Willan advises to immerse the incrustated part in water, and to pick off the scales with the finger-nails, while thus soaked. Dr. Bateman recommends that the bath should be of sulphureous waters, and the scales rubbed off with a flannel or rough cloth. But both admit that their methods produce only a partial cure; that the skin does not recover its proper texture, and that the eruption will probably recur. Dr. Bateman further recommends, as having been actually serviceable, pills made of pitch hardened by flour or any other farinaceous substance, which makes the cuticle crack and fall off, as he tell us, without the aid of external means, and leaves a sound skin underneath. Where there is an evident excess of calcareous earth the most efficacious remedy is probably to be found in a free use of acids, and especially the mineral acids, as in white urinary sand\*, to which this disease bears a near resemblance. The arsenic solution, however, is worth trying but I have no documents of its effects.

In some  
cases acids  
may be of  
consider-  
able service.

Arsenical  
solution.

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\* Supra p. 503.

## GENUS V.

## ECPHLYSIS.

## Blains.

ORBICULAR ELEVATIONS OF THE CUTICLE CONTAINING  
A WATERY FLUID.

ECPHLYSIS, ("Εκφυσις, from ἐκφύζω, "ebullio," "efferveo," "to boil or bubble up or over,") imports "vesicular eruption confined in its action to the surface;" as EMPHLYSIS, which we have long since described \*, is "vesicular eruption essentially connected with internal and febrile affection." The term is intended to include all those utricles, or minute bladders of the cuticle containing a watery fluid, and not necessarily connected with internal disease, whether *bullæ* or *vesiculæ*, between which Dr. Willan has made but little difference in his definitions, except in respect to size; and which were equally denominated by the Greek physicians phlyctænæ, a term derived from the same source. And hence the species that fairly appertain to this genus, appear to be the following :

GEN. V.

Origin of  
generic  
term.Its import  
and range.

- |                         |                |
|-------------------------|----------------|
| 1. ECPHLYSIS POMPHOLYX. | WATER-BLEBS.   |
| 2. ————— HERPES.        | TETTER.        |
| 3. ————— RHYPIA.        | SORDID BLAIN.  |
| 4. ————— ECZEMA.        | HEAT-ERUPTION. |

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\* Vol. II. p. 579.

## SPECIES I.

## ECPHLYSIS POMPHOLYX.

## Water-blebs.

ERUPTION OF BLEBS, CONTAINING A REDDISH, TRANSPARENT FLUID; MOSTLY DISTINCT; BREAKING AND HEALING WITHOUT SCALE OR CRUST.

GEN. V.  
SPEC. I.  
Origin of  
specific  
term.

Pemphix.

Pemphigus  
apyretos  
of Plenck.

POMPHOLYX or pomphus, was used amongst the Greek writers in the same sense as PEMPHIX, of which we have treated already\*, and equally imported a bladdery tumour of the skin, distended with a fluid: the Latins denominated it bulla, of which our own term WATER-BLEB is an apt and exact representative. PEMPHIX in the modern use of the term, is necessarily accompanied with fever, and hence under the present arrangement is an EMPHLYSIS as POMPHOLYX, being without fever or other constitutional affection necessarily connected with it, is an ECPHLYSIS. The latter is hence denominated Pemphigus apyretos by Plenck, and Pemphigus sine pyrexia, by Sauvages. It has, however, been properly separated from pemphigus by Dr. Willan, who has arranged it as it stands in the present work. It offers the four following varieties:

$\alpha$  Benignus.

Mild water-blebs.

Blebs pea-sized, or filbert-sized; appearing successively on various parts of the body; bursting in three or four days, and healing readily.

---

\* Vol. II. 603. Emphysis Pemphigus.

- |  |  |  |
|--|--|--|
| <p>6 Diutinus.<br/>Lingering water-blebs.</p>    | <p>Blebs gradually growing from small vesicles to the size of walnuts; yellowish: often spreading in succession over the whole body, and interior of the mouth; occasionally reproduced, and forming an excoriated surface with ulceration. Often preceded by languor, or other general indisposition for several weeks. Duration from two to four or five days.</p> | <p>GEN. V.<br/>SPEC. I.<br/>Ephlysis<br/>Pompholyx.<br/>Water-blebs.</p> |
| <p>7 Quotidianus.<br/>Quotidian water-blebs.</p> | <p>Blebs with a dark red base, appearing at night and disappearing in the morning, or appearing in the morning and disappearing at night. Found chiefly on the hands and legs.</p>   |  |
| <p>8 Solitarius.<br/>Solitary water-bleb.</p>    | <p>Bleb solitary; but reproductive in an adjoining part; very large, and containing a tea-cup-full of lymph. Preceded by tingling; often accompanied with languor.</p>   |  |

The third, or quotidian variety, is here introduced upon the authority of Sauvages, for it does not occur in Willan, who seems to have overlooked it: and hence it is not noticed by Bateman. Sauvages, from the time of its more usual appearance, calls it *epinyctis*; but as Vandermonde has given a case of an opposite kind, in which the bulla showed itself daily and subsided nightly, this name will not properly apply.

Under whatever form, however, the pompholyx appears, its causes seem to be debility and irritability either general or confined to the cutaneous exhalants. The

Quotidian variety introduced from Sauvages, who calls it *epinyctis*.

General causes.



GEN. V.  
SPEC. I.  
Ecphtysis  
Pompholyx.  
Water-  
blebs.  
Benign va-  
riety found  
in infancy.  
Quotidian  
the most  
severe.  
Medical  
treatment.

benign variety has hence been found in infancy during teething and bowel complaints, and occasionally immediately after vaccination. The quotidian has evidently succeeded to great anxiety, fatigue, watching, and low diet. It appears also chiefly in persons of advanced age, or who have been unduly addicted to spirituous liquors. It is by far the most severe of all the forms of the disease, as being painful as well as tedious. The other varieties are to be referred to like causes.

In early or middle life, Peruvian bark given freely, with an improved diet, where necessary, has formed the most successful remedy. In old age, softening the skin, and gently exciting the cutaneous exhalants, has been equally useful: but while the bark is less serviceable in old age, warm bathing has proved rather injurious in earlier life.

## SPECIES II.

### ECPHLYSIS HERPES.

#### Tetter.

ERUPTION OF VESICLES IN SMALL, DISTINCT CLUSTERS; WITH A RED MARGIN; AT FIRST PELLUCID, AFTERWARDS OPAKE; ACCOMPANIED WITH ITCHING OR TINGLING; CONCRETING INTO SCABS: DURATION FROM FOURTEEN TO TWENTY-ONE DAYS.

GEN. V.  
SPEC. II.  
Origin of  
specific  
term.  
Has been  
used in  
different  
senses.

HERPES from ἔρπω, “serpo,” “repo,” has been used in very different senses by different writers: being sometimes restricted to one or two of the modifications of the present classification, and by others extended so widely as to include both the preceding and the ensuing genus—or, in other words, cutaneous eruptions, dry, vesicular, and pustular, and in this latitudinarian sense of the term it is employed by Mr. B. Bell, who gives us a herpes

farinosus, and pustulosus, as well as a herpes miliaris and exedens.

In the present arrangement the term is limited to minute and clustering *cutaneous vesicular eruptions* alone, which forms a clear and distinctive indication. The fluid contained in the vesicles is for the most part highly acrimonious and excoriating; and hence the terms *δάρις* and *δαρτός* (darsis and dartus) "excoriatio and exco-riatus," have been applied to it; from which the French have derived their popular name for it of darte, which, by an easy corruption, has been changed in our own tongue into tetter.

The following are the varieties which seem fairly to belong to it:

- |                                |   |
|--------------------------------|---|
| α Miliaris.<br>Miliary tetter. | Vesicles millet-sized; pellucid; clusters commencing at an indeterminate part of the surface, and progressively strewed over the body; succeeded by fresh crops.                    |
| ε Exedens.<br>Erosive tetter,  | Vesicles hard; of the size and origin of the last; clusters thronged; fluid dense, yellow or reddish; hot, acrid, corroding the subjacent skin, and spreading in serpentine trails. |
| γ Zoster.<br>Shingles.         | Vesicles pearl-sized; the clusters spreading round the body like a girdle; at times confluent. Occasionally preceded by general irritation or other constitutional affection.       |
| δ Circinatus.<br>Ring-worm.    | Vesicles with a reddish base, uniting in rings, the area of the rings slightly discoloured; often followed by fresh crops.  |

GEN. V.  
SPEC. II.  
Ephlysis  
Herpes.  
Tetter.  
Impost in  
the present  
arrange-  
ment.  
Dartus.

GEN. V.  
SPEC. II.  
Ephlysis  
Herpes.  
Tetter.

ε Iris.  
Rain-bow-worm.

Vesicles uniting in small rings,  
surrounded by four concentric  
rings of different hues;  
vesicular and prominent.  
Usually found about the  
hands or instep.

α E. Herpes  
miliaris.  
Miliary  
tetter.  
Description.

The FIRST, or MILIARY VARIETY, is the herpes miliaris of Hippocrates and Hoffman, the h. phlyctenodes of Bateman. The cause of the peculiar irritability of the skin that excites this affection is very obscure. The lymph contained in the vesicles is sometimes brownish, and for the space of two or three days, other clusters successively arise near the former. The eruption commences in any part of the body. The inclosed lymph sometimes becomes milky or opaque in the course of ten or twelve days, from an absorption of its finer parts; and about the fourth day the inflammation around the vesicles assumes a duller red hue, while the minute utricles break and discharge their fluid, or dry into scales, which fall off, and leave a considerable degree of inflammation below, that still continues to exude fresh matter, which also forms into cakes, and falls off like that which preceded. The itching is always very troublesome: and the matter discharged from the vesicles is so tough and viscid, that every thing applied in the way of dressing adheres very closely, and is removed with great trouble and uneasiness.

ζ E. Herpes  
exedens  
Erosive  
tetter.  
Esthiomenos of the  
Greeks  
what?  
Herpes  
exedens.  
Correction  
of the common  
text  
of Celsus.

To the SECOND, or EROSION VARIETY, the Greeks gave the name of ἔρπης ἐσθιόμενος, or herpes esthiomenos, of which the Latin herpes exedens is a mere translation. The herpes esthiomenos, however, has hitherto been much misunderstood, and been held of a far severer character than it really possesses, in consequence of an error that has long since crept into the text of Celsus, and been propagated in the common editions, in which he is made to say that the livid and fetid ulcer which the Greeks called *ἑρπίωμα*, sometimes degenerates into a herpes esthiomenos, or exedens, "eating herpes;" as though the herpes exedens formed the worst and most gangrenous stage of

this ulcer. In the volume of Nosology I have examined this passage critically, and have shown that for herpes esthiomenos we ought to read *φαιγέδαινα*, “the ulcer called *phagedæna*,” as it is properly given in the corrected text of the variorum edition, which settles the dispute at once, and clears Celsus from the absurdity which has been ascribed to him of converting a cutaneous vesicular affection into a deep spreading ulcer of a cancerous character. Celsus, therefore, in reality makes no mention whatever of the herpes exedens or esthiomenos; and it is to other writers we must turn for its character. Galen has described it very accurately: and in the volume of Nosology I have copied and translated Galen’s description, as it occurs in different parts of his writings. The definition given of it above, is entirely taken from his representation. The ulcerative ring-worm of Dr. Bateman is, perhaps, a modification of this variety: it is of tedious and difficult cure, but is limited to hot climates.

GEN. V.  
SPEC. II.  
E. Herpes  
exedens.  
Erosive  
tetter.

Where this variety is connected, as it is sometimes found to be, with the state of the constitution, and particularly of the stomach, and the patches are accompanied with a sensation of actual burning or scalding, so as to resemble a more papulated form of measles, like the measles of this modification they are denominated *nirles* in some parts of Scotland.

Under  
what modi-  
fication  
called  
*nirles*.

The THIRD VARIETY, HERPES ZOSTER, is the *zōia ignea* of many writers, both which terms imply a belt or girdle, and are evidently given to the eruption from its ordinary seat and course as surrounding the body. The Latin word for these is *cingulum*, and from *cingulum* our own SHINGLES has been derived in a corrupt way.

γ E. Herpes  
zoster.  
Shingles.  
Zona ig-  
nea.

A slight constitutional affection sometimes precedes the appearance of this form, as sickness and head-ache, but by no means generally: for in most instances the first symptoms are those of heat, itching, and tingling in some part of the trunk, which, when examined, is found to be studded with small red patches of an irregular shape, at a little distance from each other, upon each of which

Descrip-  
tion.  
Origin.



GEN. V.  
SPEC. II.  
γ E. Herpes  
zoster.  
Shingles.  
Zona ignea.

**Progress.**

**Termination.**

**Complaint generally of little importance.**

But is said to have terminated fatally in cases probably mistaken.

**Predisposing and occasional causes.**

numerous minute elevations are seen clustering together. These, when accurately inspected, are found to be distinctly vesicular; in the course of twenty-four hours they enlarge to the size of small pearls, are perfectly transparent, and filled with a limpid fluid. The clusters are of various diameter, from one to two, or even three inches, and are surrounded by a narrow red margin, in consequence of the extension of the inflamed base a little beyond the congregated vesicles. During three or four days other clusters continue to arise in succession, and with considerable regularity, that is nearly in a line with the first, extending always towards the spine at one extremity, and towards the sternum or linea alba at the other; most commonly passing round the waist like half a sash, but sometimes, like a sword-belt, across the shoulder. As the patches which first appeared subside, the vesicles become partially confluent, and assume a livid or blackish hue, and terminate in thin dark scabs, the walls of the utricles being thickened by the exsiccation of the grosser parts of the contained fluid. The scabs fall off about the twelfth or fourteenth day, when the exposed surface of the skin appears red and tender; and, where the ulceration and discharge have been considerable, is pitted with numerous cicatrices. The complaint is generally of little importance, but is sometimes accompanied, especially on the decline of the eruption, with an intense deep-seated pain in the chest, which is not easily allayed by medicine. By some authors, as Hoffman and Platner, it is said to be occasionally malignant and dangerous, and Languis alludes to two cases in noblemen that terminated fatally\*. The disorder, however, seems in these instances to have been of a different kind from shingles, and to have depended upon a morbid state of the constitution.

This affection is found most frequently in the summer and autumn, when the skin is most irritable from in-

creased action, and in persons of a particular diathesis disposed to herpes, rather than to any other form of scaly eruption. Under these circumstances slight exciting causes will produce it, as exposure to cold after violent exercise with great heat; cold cucurbitaceous vegetables, or other substances that disagree with the stomach; inebriety; or even a sudden paroxysm of passion or other strong mental emotion, of which Schwarz tells us that he had seen not less than three cases \*. It is more common to early than to later life, being found principally between twelve and twenty-five years of age. It has sometimes appeared critical in bowel-complaints, or pulmonic affections†. It does not seem to be contagious, though asserted to be so by some writers. "In the course of my attendance," says Dr. Bateman, "at the Public Dispensary during eleven years, between thirty and forty cases of shingles have occurred, none of which were traced to a contagious origin, or occasioned the disease in other individuals."

GEN. V.  
SPEC. II.  
γ E. Herpes  
zoster.  
Shingles.  
Zona ignea.

Not contagious,  
though asserted to be  
so by some  
writers.

The RING-WORM is a still slighter variety of herpes than shingles, both with respect to disquieting symptoms, and range of the disease. Here the vesicles are restricted to the circumference of the herpetic patch, thus forming an annular outline; the central area, however, in some degree participating in the inflammation, becomes roughish and of a dull red colour, and throws off an exfoliation as the vesicles decline, leaving a red and tender surface beneath. The process is completed in about a week: but a fresh crop of herpetic circles freely spring up in the neighbourhood, or in some other part of the body; and, as such crops are occasionally repeated many times in succession, the course of the disease is not unfrequently protracted through a long period, and migrates over the entire surface from face to foot. Yet no other inconvenience attends it than a disquieting itching and tingling in the patches. It is found most

δ E. Herpes  
circinatus.  
Ring-worm.  
Description.

Termination.

Found chiefly in  
children.

\* Diss. de Zonâ serpiginosâ. Hal. 1745.

† Bateman on Cutaneous Diseases, p. 227. 8vo. 1813.

GEN. V.  
SPEC. II.  
E. Herpes  
circinatus.  
Ring-worm.  
Probably not  
contagious.

frequently in children, and though deemed contagious, affords no real ground for such an opinion. It has, indeed, been traced in some instances, in several children of the same school or family at the same time; but perhaps only where the same occasional cause, whatever that may be, has been operating upon all of them: while in most instances, the examples have consisted in single patients who have not been debarred communication or even sleeping with their school-fellows, or other branches of a family.

E. Herpes  
Iris.  
Rain-bow  
worm.  
Mistaken  
by Willan  
for a rash.

The RAIN-BOW WORM or tetter is of rare occurrence, and was by Dr. Willan at first mistaken for an exanthem, in consequence of his having only seen it in its earliest stage: on which account in the first edition of his Table of Classification he called it a rain-bow rash. The error has been corrected by Dr. Bateman, to whom we are indebted for the first accurate description of it. Its usual seat is on the back of the hands, or the palms and fingers, sometimes on the instep. The patches are very small, and at their full size do not exceed that of a sixpence. Its first appearance is that of an efflorescence, but by degrees the concentric and iridescent rings become distinctly formed and vesiculated, and even the area partakes of the vesication and becomes an umbo. The utricles are distended in about nine days, they continue stationary for two days more, and then gradually decline, and disappear a week afterwards. The central vesicle is of a yellowish-white colour; the innermost ring of a dark or brownish-red; the second of nearly the central tint; the third, which is narrower than the rest, is dark-red; the fourth, or outermost, which does not appear till the seventh, eighth, or ninth day, is of a light-red hue, and is gradually lost in the ordinary colour of the skin.

Usual seat.

Origin.

Progress.

Decline.

Only found  
in young  
persons.

This variety has only been seen in young persons, and is unconnected with any constitutional affection. Its exciting cause is not known: though it has occasionally followed a severe catarrhal affection, accompanied with hoarseness. It has also occasionally recurred several

times in the same person, always occupying the same parts and going through its course in the same periods of time.

GEN. V.  
SPEC. II.

The LOCAL RING-WORM is accompanied with a considerable sense of heat and itching or tingling irritation in the region in which it originates. That of the lip renders the adjoining parts hard, and tumid, and painful, and especially the angle of the mouth; the form is usually semi-circular; and though the herpes does not spread to any considerable distance, it is sometimes found at the same time within the mouth, forming imperfect rings on the tonsils and uvula, and producing an herpetic sore throat. It usually appears, however, as a symptom or sequel of some disease of the abdominal viscera, and sometimes proves critical to them. It terminates, as in other cases, in ten or fifteen days in dark thick scabs, which form over a red and tender new cuticle.

ζ E. Herpes  
localis.  
Local  
tetter.  
Of the lip:

within the  
mouth:

The local ring-worm of the prepuce is apt to be mistaken at first for a chancre, and still more so, if, under the influence of this mistake, it be treated with irritants, for the base will then become much more thickened and inflamed, and the natural course of the vesicles will be interrupted. If the eruption be left alone, it will prove itself in about twenty-four hours by the enlargement and distinct form of the vesicles, and their assuming an annular line. They die away after having run their course, as in the other varieties. The exciting cause of this is not known. It has been ascribed, however, by Mr. Pearson, to a previous use of mercury. Like several of the other modifications it has a tendency to recur, after it has once shown itself.

of the pre-  
puce:  
apt to be  
mistaken  
for a chan-  
cre.  
How to be  
distinguish-  
ed.

No internal use of medicine is necessary in the treatment of any of the varieties of herpes, except where the constitution becomes affected from the irritation; and in such case, a gentle purgative or two should be administered at first, and a plan of tonics be laid down afterwards, the diet being simple and plain.

General  
medical  
treatment.

External applications are almost of as little avail, for the eruption must have time to run through its course,



GEN. V.  
SPEC. II.  
EcpHlysis  
Herpes.  
Tetter.  
Treatment.

and if this be interrupted we shall certainly prolong the period, and add to the irritation. Stimulating ointments and lotions were in use formerly but they have now been judiciously laid aside as only tending to exacerbate the affection. Wherefrom the viscosity of the discharged fluid the vesicles are apt to adhere to the clothes or whatever covering they come in contact with, they may be covered with a layer of cetaceous cerate on lint: but a layer of lint alone will be most useful in the local variety of the prepuce, as even oleaginous applications are apt to irritate the disease when in that quarter.

### SPECIES III.

## ECPHLYSIS RHYPIA.

### Sordid Blain.

ERUPTION OF BROAD, FLATTISH, DISTINCT VESICLES;  
BASE SLIGHTLY INFLAMED: FLUID SANIOUS; SCABS  
THIN AND SUPERFICIAL: EASILY RUBBED OFF AND  
REPRODUCED.

GEN. V.  
SPEC. III.  
Rupia of  
Bateman.

Name why  
changed.

For a distinct arrangement of this species in medical classification, we are altogether indebted to Dr. Bateman, who has denominated it *rupia*, from ῥύπος, “sordes,” as indicative of the ill-smell and sordid condition of the diseased parts: and in his Delineations has given two very excellent and instructive coloured plates of its appearance under different modifications. ῥύπος, however, with its aspirate and the ordinary power of the *v* should be rendered in Latin characters RHYPIA as now given, and only altered for the sake of greater correctness.

The species offers three varieties as follow :

- |   |                       |                                   |
|---|-----------------------|-----------------------------------|
| α | Simplex.              | Scab flat; livid or blackish;     |
|   | Simple sordid blain.  | shape, circular.                  |
| c | Prominens.            | Scab elevated, conical, and       |
|   | Limpet-shelled blain. | blackish ; shape, limpet-shelled. |
| γ | Escharotica.          | Sanious discharge erosive,        |
|   | Erosive blain.        | producing gangrenous eschars.     |

GEN. V.  
SPEC. III.  
Ecephylis  
Rhyphia.  
Sordid  
blain.

The vesicles under this species never become confluent: their progress is slow, and leads to an ill-conditioned discharge which concretes into thin, superficial, and chocolate-coloured scabs, of the distinctive characters noticed above. When the ulcers under the scab, in the two first varieties, heal, they still leave the surface of a livid or blackish colour, as if from a pigment in the rete mucosum. The second variety assumes the direct form and swell of a small limpet-shell with its open part downwards, but its colour is much darker \*.

General remarks.

Limpet-shelled variety.

All the modes of this eruption are connected with a debilitated, and hence frequently with a cachectic state of the system, and the first is sometimes accompanied with symptoms resembling those produced by a morbid poison. They occasionally make a near approach to the ecthymata† but differ in the form, shape, and size of the vesicle, and in the colour and consistence of the contained fluid, as consisting of flattened muddy blains, and forming larger and more circular scabs.

The escharotic variety affects only infants and young children when reduced by bad diet and nursing, or some severe disease, as the small-pox. The vesicles are generally found on the loins, thighs, and other extremities, and appear to contain a corrosive sanies: some of which frequently terminate in gangrenous eschars, which leave deep indentations.

Escharotic variety.

\* Bateman, ut supra, p. 237.

† See the ensuing Genus, Species III. Ecephylis, Ecthyma.

GEN. V.  
SPEC. III.  
Ecephlysis  
Rhyphia.  
Sordid  
blain.  
Mode of  
treatment.

The disease is only to be combated by supporting the system, and restoring it to a state of vigour by means of good, light, nutritious diet, and the use of alterative and tonic medicines, as the compound pill of the submuriate of mercury, bark, columbo, and sarsaparilla.

## SPECIES IV.

### ECPHYSIS ECZEMA.

#### Heat Eruption.

ERUPTION OF MINUTE, ACUMINATED VESICLES, DISTINCT, BUT CLOSELY CROWDING ON EACH OTHER; PELLUCID OR MILKY; WITH TROUBLESOME ITCHING OR TINGLING; TERMINATING IN THIN SCALES OR SCABS; OCCASIONALLY SURROUNDED BY A BLUSHING HALO.

GEN. V.  
SPEC. IV.  
Origin of  
specific  
term.  
Ordinary  
cause ex-  
cess of heat.

Often con-  
nected

with phly-  
zacæ or  
furuncles.

ECZEMA from ἐκζέω, “efferveo” is the hidroa of Sauvages and Vogel: it is common to all countries in the summer, and has been described in all ages. Its proximate cause is irritation in consequence of exposure to the direct rays of the sun, or to air heated to a high temperature, or violent exercise. Hence it chiefly affects those parts that are most exposed to this influence, as the face, neck, and fore arms in women, but particularly the back of the hands and fingers, the latter being sometimes so tumefied that the rings cannot be drawn off. The blushing halo by which they are surrounded is popularly called a *heat-spot*. In men of a sanguine temperament, and who use violent exercise in hot weather, these vesicles are intermixed in various places with minute pustules possessing a hard, circular base, the phlyzacium of Willan, or with hard and painful tubercles, which appear in succession, and rise to the size of small boils, and sup-

purate very slowly, though without a central core. The vesicles are apt to be confounded with two other eruptions of very different kinds, miliaria, while it spreads widely over the body, and scabies, when fixed chiefly about the wrists, the ball of the thumbs, and the fingers. It is, however, distinguishable from the former by being unaccompanied with fever or any other constitutional derangement; and from the latter by the pellucidity and acumination of the vesicles, the closeness and uniformity of their distribution, and the absence of surrounding inflammation, or subsequent ulceration. The sensation moreover, to which it gives rise, is that of a smarting or tingling rather than of itching.

The eruption is irregularly successive, and has no determinate period of decline, which very much depends upon the irritability of the skin itself. Generally, however, it runs its course in two or three weeks, and subsides slowly and almost imperceptibly. But where the skin is highly irritable it will sometimes continue till the weather grows cool in the autumn, and consequently for two or even three months.

Medicine external or internal seems to accomplish but little. The re-action of a cold bath, in most cases, increases the irritation: and hence a tepid bath is most serviceable. Astringent lotions add equally to the irritability, as do unguents of all kinds. Washing the parts with mild or Windsor soap and tepid water, I have found most effectual—when, in a few days, the skin will bear a soap of a coarser kind with still more advantage. Where the irritability of the skin is connected with that of the general frame, the mineral acids, and other astringent tonics, have proved decidedly beneficial.

The eczema *impetiginodes* of Dr. Bateman is an eczema set down on an impetiginous habit of the skin, and is hence a mixed complaint. His eczema *rubrum* or *mercuriale* has already been described as an erythema\*.

GEN. V.  
SPEC. IV.  
Eczema.  
Heat  
eruption.  
Sometimes  
confounded  
with milia-  
ria, or  
scabies.  
How distin-  
guishable.

Progress.

Medical  
treatment.

Eczema  
impetigi-  
nodes of  
Bateman.

\* Erythema vesiculare. Vol. II. p. 312.



## GENUS VI.

## ECPYESIS.

## Humid Scall.

ERUPTION OF SMALL PUSTULES DISTINCT OR CONFLUENT;  
HARDENING INTO CRUSTULAR PLATES.

GEN. VI.  
Origin of  
the generic  
term.

How distin-  
guished  
from em-  
pyesis.

Origin of  
the old  
English  
term scall.

Arabic  
and Hebrew  
synonyms.

Saphata  
netek.

ECPYESIS is a Greek term from ἐκπύω, “suppuro.” It is here used in contradistinction to EMPYESIS already employed \* to import deep-seated suppurations; and consequently is intended to describe pustular eruptions simply cutaneous, or not necessarily connected with internal affection as opposed to those which result from an internal cause. The genus, therefore embraces the pustulæ of Dr. Willan, which he has correctly defined “elevations of the cuticle with an inflamed base containing pus.”

The old English term for ecpyésis or pustula in this sense of the word is *scall*, from the Saxon *scala* or *sceala*, not essentially different from the medical sense of *scale*. The scall was of two kinds, dry and moist: both which are clearly referred to in the Levitical law that governed in the matter of plague. The former is there denominated ספחת (*saphat*), as we have already observed when treating of lepra, and the latter, or the eruption before us נטק (*netek*) †. The Arabians, like our own ancestors, denominated both these by a common name (سقاء)

\* Vol. II. p. 617. Class III. Ord. II.

† Leviticus xiii. 30, 31.

(sahafata) from (سَهَف) (sahaf), squammæ, or rather from the Hebrew ספחת (saphat): distinguishing the one from the other, like our ancestors also, by the adjuncts dry and humid: so that the sahafata of the Arabians is a direct synonym of the old English or Saxon scall. In our established version the Hebrew נֶתֶק (netek), which imports the eruption before us or *humid* scall, is by mistake rendered *dry* scall, which as remarked above is a ספחת (saphat). The expletive *dry* does not occur in the original, and that נֶתֶק (netek), denotes humid scall rather than dry scall is clear from the explanation contained in the bible-context, in which it is represented as a scall seated on the hair or beard, and affecting its strength and colour, forming so thick a crust or scab that its removal by shaving cannot be accomplished, or ought not to be attempted. It is distinctly, therefore, a porrigo or scabby scall, and is thus actually rendered in the Latin version of Tremellius and Junius, forming one of the species of the present genus; and seems to be one of the two modifications of it which, in our own language, are denominated honeycomb-scald, and scalled-head. Θραῦσμα by which *netek* is rendered in the Septuagint is literally *crust*, a very significant term in common use to express the peculiar nature of the scab that hardens on the porriginous sore. Tetter, a corruption from the French dartre, or the Greek δαρτρός, has of late years been used synonymously with scall, and has almost supplanted it: but the proper meaning of dartre, or tetter, is herpes, to which, in this work, it is confined, an excoriating eruption of a vesicular or ichorous kind.

The species that belong to this genus are the following:—

- |                       |                 |
|-----------------------|-----------------|
| 1. ECPYESIS IMPETIGO. | RUNNING SCALL.  |
| 2. ——— PORRIGO.       | SCABBY SCALL.   |
| 3. ——— ECTHYMA.       | PAPULOUS SCALL. |
| 4. ——— SCABIES.       | ITCH.           |

GEN. VI.  
Ecpyesis.

Ecpyesis  
the netek  
of the Levi-  
tical code :

which is  
rendered  
porrigo by  
several of  
the Latin  
versions.

Thrausma  
what.

Tetter  
whence de-  
rived.

GEN. VI.  
Ecpyesis.  
All these  
terms have  
been  
loosely em-  
ployed for-  
merly.

All these specific terms have been very loosely employed, and in very different significations by most writers. They are here limited to the definite senses assigned them by Dr. Willan; and, with the exception of ecthyma, by Celsus, whom Willan has followed. Ecthyma does not occur in Celsus, though it is found in Galen, but in a sense somewhat different from its use in modern times, as will be further noticed hereafter.

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## SPECIES I.

### ECPHLYSIS IMPETIGO.

#### Running Scall.

PUSTULES CLUSTERING, YELLOW, ITCHING; TERMINATING  
IN A YELLOW SCALY CRUST, INTERSECTED WITH CRACKS.

GEN. VI.  
SPEC. I.

THE specific term is a derivative from impeto "to infest," and the following are the varieties the species offers us:

α Sparsa.

Scattered humid Scall.

Clusters loose; irregularly scattered; chiefly over the extremities; often succeeded by fresh crops.

ε Herpetica.

Herpetic Scall.

Clusters circular, crowded with pustules, intermixed with vesicles; often with exterior concentric rings surrounding the interior area as it heals; itching accompanied with heat and smarting. Chiefly in the hands and wrists.

## γ Erythematica.

Erythematic Scall.

Pustules scattered; preceded by erythematic blush and intumescence; often by febrile or other constitutional affection. Chiefly in the face, neck and chest.

GEN. VI.  
SPEC. I.  
Ecphtysis  
Impetigo.  
Running  
Scall.

## δ Laminosa.

Laminated Scall.

Pustules confluent; chiefly in the extremities; the aggregate scabs forming a thick, rough, and rigid casing around the affected limb, so as to impede its motion; a thin ichor exuding from the numerous cracks.

## ε Exedens.

Erosive Scall.

The purulent discharge corroding the skin and cellular membrane.

## ζ Localis.

Local humid Scall.

Confined to a particular part; mostly the hands or fingers; and produced by external stimulants, as sugar or lime.

The differences are sufficiently clear from these definitions. The first variety or SCATTERED HUMID SCALL has sometimes been confounded with varieties of PORRIGO and SCABIES, constituting two subsequent species of the present genus. It differs from porrigo, however, in having the purulent discharge succeeded by an ichorous humour soon after the eruption has shown itself, and in the possession of a thinner and less extensive scab. It differs from scabies in its more copious exsudation of ichor, when the latter is secreted, in the magnitude and slower progress of the utricles, and in the sensation of heat and smarting, rather than of itching which accompanies it. And differs from both in being uncontagious.

The ERYTHEMATIC FORM commences with the ordinary signs of an erysipelas, as a redness and puffy swelling

General  
remarks.  
α E. Impetigo sparsa.  
Scattered humid scall: has been confounded with porrigo and scabies. How distinguishable.



GEN. VI.  
SPEC. I.  
γ E. Impe-  
tigo erythe-  
matica.  
Erythe-  
matic  
variety  
humid  
scall.  
How distin-  
guishable  
from ery-  
sipelas.

of the upper part of the face with an edema of the eye-lids; and the irritation is sometimes accompanied with some degree of pyrexia for two or three days. But a critical eye will easily perceive that instead of the smooth polish of the erysipelas there is a slight inequality on the surface as if it were obscurely papulated, and in a day or two the disease will show its true character by the formation of numerous psudracious pustules over the inflamed and humid skin, instead of the large irregular bullæ of the erysipelas. The pustules are formed with a sense of heat, smarting and itching, and, as they break, they discharge a hot and acrid fluid, which adds to the irritation and excoriation of the surface. In this painful condition the face or other part, remains for ten days or a fortnight when the discharge begins to diminish, and to concrete into thin yellowish scabs. Fresh pustules, however, arise in the neighbourhood, and the disease runs on from one to two or three months, according to the irritability of the skin and its tendency to be affected by continuous sympathy. It has sometimes perambulated the entire surface from head to foot: during the whole of which course the constitution is scarcely disturbed, or in any way affected.

δ E. Impe-  
tigo lami-  
nosa.  
Laminated  
humid  
scall.

The LAMINATED HUMID SCALL is sometimes conjoined in the lower limbs with cellular dropsy, and produces severe ulceration: and its casing or incrustation occasionally extends to the fingers and toes, and destroys the nails, being succeeded by nails of an imperfect fabrication, thick, notched, and irregular.

ε E. Impe-  
tigo ex-  
edens.  
Erosive hu-  
mid scall.

The EROSIIVE FORM is rare, and highly intractable. It commences on the side of the chest or trunk of the body, and gradually extends itself. The pustules are here intermixed with vesicles, the fluid is peculiarly acrid and erosive, and the skin and cellular texture are slowly, but deeply and extensively destroyed, with very great pain and irritation: insomuch that the disease is said by some, though with little foundation, to be of a cancerous nature.

ζ E. Impe-  
tigo localis.  
Local hu-  
mid scall.

The LOCAL FORM is chiefly produced by the use of irritant materials, constantly applied to the parts affected,

which are chiefly the hands, as sugar among the labourers in grocery warehouses, and lime among bricklayers. Whence this variety has been vulgarly called *Grocer's Itch*, or *Bricklayer's Itch*. According to the peculiar character of the skin the eruption is sometimes vesicular, and belongs to the preceding genus, being a modification of eczema; but more generally pustulous, and appertains to the genus before us. In neither instance does it seem to be contagious.

GEN. VI.  
SPEC. I.  
§ E. Impetigo localis.  
Local humid scall.  
Grocer's Itch.  
Bricklayer's Itch.  
Uncontagious.

Most of the causes enumerated under LEPRIASIS, and many of the species of ECPLHYSIS operate in the present species, as general debility or relaxation with a skin peculiarly irritable; poor diet; filth; fatigue; and local stimulants. And hence, where the constitution seems to catenate with the disease, the same general remedies have been found successful; as the alkalies, sulphur taken freely, Plummer's pill, the alterative decoctions or infusions of dulcamara, ledum palustre, juniper-tops, sarsaparilla, and mezereon; together with a frequent use of warm bathing for the purpose of purifying and softening the skin. In connexion with these we should have recourse to such external applications as may best tend to diminish the irritability of the cutaneous vessels and give tone to their action. The most useful of these are the metallic oxydes, with the exception of those of lead which are rarely useful, at least if employed alone: and are often found injurious. About ten grains of sublimate dissolved in a pint of distilled water, with a small proportion of muriated ammonia, will frequently prove a valuable remedy. Or the oxyde of zinc may be applied in the form of an ointment, which I have often found serviceable prepared in the manner already noticed under the species prurigo. Lime-water is also recommended by many writers, and has proved useful as a stimulant astringent; as have also solutions of alum, and sulphate of zinc, and sulphuret of potash; the old liver of sulphur, but I have found them less useful than the zinc ointment.

General causes.

Medical treatment.

Alterants.

External applications.

Metallic tonics and astringents.

Lime-water.

The acrid oil contained in the shell of the cashew-

Cashew-nut oil.

GEN. VI.  
SPEC. I.  
Ecpchylis  
Impetigo.  
Running  
Scall.  
Treatment.  
Skin will  
not always  
bear sti-  
mulants.

nut has often been employed with great advantage in some of these varieties and especially where the disease is decidedly local, and a local change of action is the grand desideratum. In many cases, however, the skin is too irritable for stimulants of any kind, and will only bear warm water, or a decoction of mallows, poppy-heads, or digitalis: after which the excoriated surface may be illined with cream or an emulsion of almonds. In general, nevertheless, astringent stimulants agree far better with this affection than with herpes. The burning and maddening pain in the erosive scall can rarely be alleviated but by opium. The Harrowgate waters are generally recommended, and in many instances have certainly been found useful.

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## SPECIES II.

### ECPYESIS PORRIGO.

#### Scabby Scall.

PUSTULES STRAW COLOURED; CONCRETING INTO SCALES  
OR YELLOW SCABS.

GEN. IV.  
SPEC. II.  
Porrigo of  
Celsus and  
Willan.

THIS is the PORRIGO of Celsus and Willan, from *porrigo* "to spread about;" and the tinea of Sauvages and most of the nosologists. It offers the following varieties:

α Crustacea.  
Milky Scall.

Pustules commencing on the cheeks or forehead in patches; scabs often confluent, covering the whole face with a continuous incrustation. Found chiefly in infants during the period of lactation.

## 6 Galeata.

Scalled-head.

Pustules commencing on the scalp in distinct, often distant patches; gradually spreading till the whole head is covered as with a helmet; cuticle below the scabs, red, shining, dotted with papillous apertures, oozing fresh matter; roots of the hair destroyed: contagious. Found chiefly in children during dentition.

GEN. VI.  
SPEC. II.  
Ecpyesis  
Porrigo.  
Scabby  
scall.

## 7 Favosa.

Honey-comb scall.

Pustules common to the head, trunk, and extremities; pea-sized; flattened at the top; in clusters, often uniting; discharge fetid; scabs honey-combed, the cells filled with fluid. Found both in early and adult age.

## 8 Lupinosa.

Lupine scall.

Pustules minute in small patches, mostly commencing on the scalp; patches terminating in dry, delving scabs resembling lupine seeds; the interstices often covered with a thin, whitish, exfoliating incrustation. Found chiefly in early life.

## 9 Furfuracea.

Furfuraceous scall.

Pustules very minute, with little fluid; seated on the scalp: terminating in scurfy scales. Found chiefly in adults.

## 10 Circinata.

Ring-worm scall.

Clusters of very minute pustules seated on the scalp in circular plots of baldness with a brown or reddish, and somewhat furfuraceous base. Found chiefly in children.



GEN. VI.  
SPEC. II.  
α E. Porrigo  
crustacea.  
Milky  
Scall.  
Crusta  
lactea, or  
Tinea lac-  
tea of au-  
thors.  
Croute de  
lait.  
Commence-  
ment.

Progress.

Termina-  
tion.

The FIRST VARIETY is the crusta *lactea* of numerous authors, the tinea *lactea* of Sauvages, so called from the milky or rather the creamy appearance and consistency of the discharge, whence the French name of croute de lait, and our own of milky-scall. It is almost exclusively a disease of infancy, at which period the skin of the head is peculiarly tender and delicate. It commences ordinarily on the forehead and cheeks in an eruption of numerous, minute and yellowish white pustules, which are crowded together upon a red surface, and break and discharge a viscid fluid that concretes into thin yellowish scabs. As the pustular patches spread the discharge is renewed, and continues to be thrown forth from beneath the scabs increasing their thickness and extent till the forehead, and sometimes the cheeks and entire face become covered as with a cap; the eye-lids and nose alone remaining free from the incrustation. The quantity of the discharge varies considerably, so that in some instances the scabs are nearly dry. As they fall off and cease to be renewed, a red and tender cuticle is exposed to view, like that in impetigo, but without a tendency to crack into fissures. Smaller patches are occasionally formed about the neck and breast, and even on the extremities, and the disease runs on for several weeks, sometimes several months: during which the constitution suffers but little except from a troublesome itching which sometimes interferes with the rest, and destroys the digestion. And, where the last takes place, a foundation is immediately laid for general debility, and especially for torpitude and enlargement of the mesenteric glands. In many instances the eruption returns at irregular intervals, after having appeared to take its leave; apparently reproduced by cutting additional teeth, or some other irritation. Dr. Strack affirms that, when the disease is about to terminate, the urine acquires the smell of that voided by cats; and that, where there is no tendency to this change of odour, the disease is generally of long continuance. It is singular that notwithstanding the

extensive disfigurement and sometimes depth of the ulcerations, no permanent scar or deformity is hereby produced.

The SECOND VARIETY OR SCALLED HEAD originates generally in the scalp, and consists of pustules somewhat larger, and loaded with a still more viscid material than the first. The pustules are circular in form with a flattish, and irregular edge. They sometimes commence on the cheeks, but where the face is affected the ordinary course is from the scalp towards the cheeks by the line of the ears. They are usually accompanied with a considerable degree of itching, and harass children from six months to four or five years of age. The disease is rarely found in adults. From the quantity of the discharge the hair is matted together, the scabs become considerably thickened, the ulceration spreads into the integuments, and the indurated patches seem, in some cases, to be fixed upon a quagmire of offensive fluid. The lymphatic system, if not in a state of debility before the appearance of the eruption, soon becomes affected and exhibits marks of irritation, but whether from general debility or absorbed acrimony it is difficult to say. The glands on the side of the neck enlarge and harden, exhibiting at first a chain of small tumours lying loose under the skin; after which some of them inflame, the integuments become discoloured, and a slow and painful suppuration ensues. The ears unite in the inflammation, and from behind them, or even from their interior a considerable quantity of the same viscous and fetid fluid is poured forth. In some cases the submaxillary and parotid glands catenate in the inflammatory action. The fluid is peculiarly acrimonious, and consequently whatever part of the body it lights upon accidentally becomes affected by its influence. Hence the arms and breasts of nurses evince frequently the same complaint, and other domestics receive the disease by contagion. Its duration is uncertain, but it is more manageable than the preceding species: and if not maintained by the irritation of teething or any other excitement, it may be conquered in a few weeks.

GEN. VI.  
SPEC. II.

♂ E. Porri-  
galeata.  
Scal-  
head.  
Descrip-  
tion.  
Commence-  
ment.

Progress.

Lymphatic  
system soon  
affected.

Glandular  
tumours.

Fluid pecu-  
liarily acri-  
monious..

Duration  
uncertain.

## GEN. VI.

## SPEC. II.

## γ E. Por-

## rigo favosa.

## Honey-

## comb scall.

## Nearly re-

## lated to the

## preceding.

## Tinea

## favosa.

## Scabies

## favosa of

## authors.

Odour so  
rank and  
offensive as  
often to in-  
flame the  
eyes of  
nurses.

## δ E. Porrigo

## lupinosa.

## Lupine

## scall.

## ε E. Porrigo

## furfuracea.

## Furfurace-

## ous scall.

The HONEY-COMB SCALL, or third variety, differs very little from the preceding except in the seat of the patches and in an increased size and thickness of the scab, which is often cellular or honey-combed. And as pustules of this form have been called favi, from their resemblance to honey-combs, this variety of the disease from the time of Ali Abbas to the present has been distinguished by the name of tinea favosa, scabies favosa, or porrigo favosa. By Dr. Bateman it is united with the preceding variety. The colour of the scab is yellowish or greenish, and semi-transparent, its surface highly irregular, and indented, and its consistency softish. The pustules are found on the face, trunk, and extremities. The irritation they produce excites the little sufferer to be perpetually picking and scratching them about the edges, by which means the skin is kept sore and the ulceration extended. This is particularly the case about the heels and roots of the toes, the extremities of which last are sometimes ulcerated, while the pustules even creep under the nails. The odour from this and the preceding variety is not only most rank and offensive to the smell, but occasionally inflames the eyes of nurses and others who are officially surrounded by its vapour.

The LUPINE VARIETY, is peculiarly characterised by the driness of its scabs, which are formed upon small clusters of minute pustules, the finer part of whose fluid is rapidly absorbed, so that the part remaining concretes, and shows in the central indentations of its surface a white scaly powder. The size of the scab is that of a sixpence: it is found in the head, and in other parts, but, when in other parts than the head, it is often much smaller in diameter, and sometimes does not exceed two lines. It is liable to increase if neglected, and is usually tedious and of long duration.

The FURFURACEOUS or BRANNY SCALL makes a still nearer approach to the tribe of lepidosis, and is often mistaken for a pityriasis or lepriasis, particularly where it appears in the scalp, which is its most common seat. It commences, however, if its course be watched, with an

eruption of minute pustules, which nevertheless possess a very small quantity of fluid, so that the whole is soon absorbed, and the excoriation or ulceration is but slight. It is apt to be renewed, is attended with a considerable degree of itching, and some soreness of the scalp, the hair partially falls off, becomes thin, less strong in its texture, and somewhat lighter in its colour: none of which symptoms occur in any species of the true scaly eruption. The glands of the neck moreover are occasionally swelled and painful.

The RING-WORM SCALL has been known and described under different names, from the Greek writers to our own day. It consists of clusters of very minute pustules forming circular plots of a brown or reddish hue. There is sometimes only a single plot; and the pustules are so small as to elude all notice unless very closely examined, though a papular roughness is obvious to every one. The exudation is small, yet if neglected it concretes into thin scabs, sometimes irregularly tipped with green, while the plots expand in diameter, and become confluent. The hair is injured from the first attack; appearing thinner and lighter in colour, and breaking off short; in progress of time the roots are affected and the plots are quite bald, and, as they spread into each other, the baldness extends over the whole head, and nothing remains but a narrow border of hair forming the outline of the scalp. It is chiefly confined to children, and since the multiplication of large boarding-schools and manufacturing, in which last they are employed with too little attention to their health, it has been strikingly common in our own country: and from its contagious property has been propagated with great rapidity. It sometimes spreads from the head over the forehead and neck.

Porrigo, therefore, is a disease which appears under different modifications of ulceration, from sores of some depth oozing a thick fetid pus, and covered with a broad, scaly scab, to eruptions so minute as to require the aid of a glass, being covered with fine furfuraceous exfoliations,

GEN. VI.  
SPEC. II.  
E. Porrigo  
furfuracea.  
Furfuraceous  
scall.  
Makes an  
approach to  
dandriff,  
and has  
been mis-  
taken for it.  
How dis-  
tinguish-  
able.  
Descrip-  
tion.  
E. Porrigo  
circinata.  
Ring-worm  
scall.  
History.

Chiefly con-  
fined to  
children.

Highly con-  
tagious.

General  
remarks on  
porrigo.



GEN. VI.  
SPEC. II.

ζ Ecpyesis  
Porriſo.  
Running  
ſcall.

General  
predis-  
ponent  
cauſe.

Exciting  
cauſes.

and diſcharging a thin purulent ichor, manifested rather by its effects than its preſence.

The predisposing cause is in every instance irritability of the cutaneous exhalants; and as we find this irritability much greater in infancy than in mature life, the different varieties of porriſo are chiefly confined to this season. The exciting causes are filth, or want of cleanliness, bad nursing, innutritious diet, want of pure air, and whatever else has a tendency to weaken the system generally, and irritate the skin locally. And we may hence ſee why ſome of the varieties are found occaſionally as ſequels on lues, or on thoſe who have debilitated their conſtitutions by high living, and eſpecially by an immoderate uſe of ſpirits.

Medical  
treatment.  
In all in-  
ſtances  
may be oc-  
caſionally  
connected  
with the  
conſtitu-  
tion: and  
hence alter-  
ants.

Sedatives.

Viola tri-  
color.

It is hence obvious that many, perhaps all these varieties may, in ſome inſtances, be connected with the general ſtate of the ſystem; and in ſuch caſes the reſtorative diet-drinks and alterative tonics, enumerated under the genus ecpyſiſis will often be equally advantageous here. Sulphur and the vegetable alkalies have alſo been found ſerviceable, but eſpecially ſmall doſes of calomel, or the black or red oxyd of mercury. And if there be much general irritation it will be adviſeable to unite theſe with the conium or hyoſcyamus. The paſy or heart's eaſe (*viola tricolor*) was in high vogue for cutaneous eruptions, generally and particularly for thoſe before us during the ſixteenth and ſeventeenth centuries. It fell, however, into diſrepute, but was revived by Dr. Strack, towards the cloſe of the eighteenth century, in conſequence of his prize diſſertation delivered at Leyden, in 1779, in which he ſpeaks warmly of its ſucceſs in all the diſeaſes belonging to the preſent and the enſuing genus\*. In employing this herb Dr. Strack directs that a handful of the freſh, or half a drachm of the dried leaves, be boiled in

\* De Crustâ Lactea Infantûm. Francf. 1779.

See alſo Comment. Lips. Vol. xxvii. p. 170.

Marcard. Beſchreibung von Pymont. Mezger. Vermichte Scriſten. B. ii.

half a pint of milk to be strained for use, and form a single dose, which is to be repeated morning and evening. He asserts that during the first eight days the eruption usually increases considerably, and that the patient's urine acquires the cat-like smell we have already alluded to: but that, where the medicine has been taken a fortnight, the scab or scurf begins to fall off in large scales, leaving the skin clear. The remedy is to be persisted in till the skin has resumed its natural appearance, and the urine its natural odour. Dr. Strack also recommends, as an internal remedy, which we should little have expected, a decoction of the leaves of the tussilago *Farfara* or coltsfoot, which I should scarcely have noticed were it not that this medicine was also esteemed useful by Dr. Cullen, as we had formerly occasion to observe, in sores dependent upon a scrophulous habit, many of which he tells us he has seen healed under its employment both in extract and decoction\*. As to the *viola tricolor*, Baldinger, who seems also to have tried it, and upon a pretty large scale, asserts that it is of inferior value to sulphur†. and Selle, that if given in small doses it is useless, and if in larger that it does more harm than good‡.

There is some difficulty in determining upon the external applications. Generally speaking, the skin under all the modifications of this species bear astringent and even stimulant remedies well, and yield without obstinacy to their use: but in a few instances we meet with the contrary, and aggravate the pustules, and extend their range by the slightest irritants. The most irritable varieties are the honey-comb, where it occurs at the extremities of the joints, as about the toes and heel and behind the ears, and the furfuraceous. The last, however, will usually bear a lotion of mild soap and water, and afterwards equal parts of starch and calamine re-

GEN. VI.  
SPEC. II.  
Ecpyesis  
Porrigio.  
Scabby  
scall.  
Treatment.

Tussilago  
Farfara.

External  
applica-  
tions.  
The species  
will gene-  
rally bear  
stimulants  
and im-  
prove under  
them, but  
not always.  
The most  
irritable the  
honey-  
comb  
variety,  
and the fur-  
furaceous.

\* Mat. Med. Part. II. Chap. XVIII.

† Neues Magazin für praktische Aerzte IX. p. 117.

‡ Medicina Clinica. I. 185.

GEN. VI.  
SPEC. II.  
Ecpyesis  
Porrigo.  
Scabby  
scall.  
Treatment  
of both  
these.  
Coculus  
Indicus.

duced to a very fine powder, and dusted over the patches. The honey-combed scall often requires sedative fomentations and cataplasms at first, but will afterwards allow an application of the zinc ointment, or even that of the nitric oxyde of mercury diluted with an equal part of calamine cerate. Dr. Willan was attached to the coculus Indicus in cases of this sort, which he prescribed in the proportion of two drachms of the powdered berry to an ounce of lard. In common, however, we may employ a bolder practice and use pretty actively alkaline or acid lotions, or solutions of zinc, or warm resinous ointments of pitch or gum elemi. All that is wanting is the excitement of a new and healthier action, which the cutaneous vessels for the most part receive with but little trouble; and this, with a punctilious attention to cleanliness, is in most cases sufficient to ensure a cure.

Sulphur  
and cream.

With the sulphur ointment, or, which is better, sulphur and cream, I have often succeeded in curing very virulent attacks of the porrigo *favosa* that have covered the whole of the face, and matted the beard into a most disgusting spectacle.

Treatment  
of porrigo  
galeata or  
scalled-  
head.  
Banyer's  
unguent.

In the external treatment of porrigo *galeata*, or scalled-head, one of the most effectual applications is a modification of Banyer's unguentum ad scabiem, for in its original form it is both too irritant and too astringent as well as very unscientifically compounded. I was first induced to try this preparation from the recommendation of my excellent and learned friend Dr. Parr; it has since been recommended by Professor Hamilton, and more lately by Dr. Bateman. Each has altered its composition in a slight degree, and the following form, which is more simple than any of the rest, is that which I have been in the habit of employing with great success for many years. To a powder consisting of two drachms of calomel and an ounce of exsiccated alum and cerusse, add six drachms of Venice turpentine and an ounce and a half of spermaceti cerate. The hair is first to be cut off as close as may be, for shaving is often impossible; the scalp is then to be slowly and carefully washed with soap

Modified  
by the  
author.

and water, and, where there is very little irritation, with soft soap as being more stimulant, in preference to hard; the washing to be repeated night and morning, and the scalp to be well dried afterwards. The ointment is to be applied after the washing every night, and is to be well rubbed all over the head. It may be washed off in the morning; and, when the scalp is made dry, instead of applying it through the day, the head may be thoroughly powdered with nicely levigated starch contained in a fine linen or cambric bag. The scabs and incrustations will hereby become desiccated, and often brittle, for the ointment alone will diminish, and at length utterly suppress the morbid secretion. And in this state they should be gently picked or combed off, one after another as they grow loose and become detached at the edges.

GEN. VI.  
SPEC. II.  
Ecpyesis  
Porrigo.  
Scabby  
scalp.  
Treatment.

Crusts to be  
removed.

In the last variety the ringworm porrigo, or alopecia *porriginosa* of Sauvages, though the appearance is far less disgusting, and unaccompanied with smell of any kind, the bulbs of the hair seem more affected than in any of the preceding. And hence this, which is one of the most common modifications of the disease, and, as we have already observed, has been peculiarly frequent of late years, has been found one of the most obstinate. It has ordinarily made its appearance among children at school, but is not confined either to schools or to childhood; for I have at this moment a medical friend under my care, troubled with the same complaint, whose age is about forty.

Treatment  
of ring-  
worm por-  
rigo: the  
alopecia  
*porriginosa*  
of Sauva-  
ges.

The disease appears to be seated under the cuticle in the mouths of the secernents of the rete mucosum, which secrete a material of a different colour from what is natural and healthy, and hence give a brown or reddish hue to the entire patch. This material affords no nutriment to the bulbs of the hair, and seems sometimes to be acrimonious: whence the hair, like the rete mucosum itself, changes its colour; and, with the change of colour, becomes thinner and weaker, and breaks off short at the base of the cuticle, sometimes at the roots below.

Disease  
seated  
under the  
cuticle.

The acrimony of the secretion occasionally produces a morbid sensibility in the minute vessels of the part affected,

Secretion  
peculiarly  
acrimoni-  
ous and



GEN. VI.  
SPEC. H.  
Ecpyesis  
Porrigo.  
Scabby  
scall.  
Treatment.

excites  
great sensi-  
bility in the  
part.

This sensi-  
bility to be  
first remov-  
ed, and  
afterwards  
depilato-  
ries.

Mercurial  
prepara-  
tions :  
other me-  
tallic depi-  
latories.

so that the patient can hardly bear the patch to be pressed upon or the comb to pass over it; yet this is not a common effect, for irritants may usually be employed from the first.

Where this morbid sensibility exists we must endeavour to shorten its stage, for it will at length pass off naturally, by tepid and sedative fomentations, as of poppy-heads, or digitalis: and afterwards have recourse to depilatories, without which we can do nothing, for we cannot otherwise penetrate to a sufficient depth; and hence the more active they are the more radical will be their effects. Different preparations of mercury have for this purpose been chiefly employed, and mostly a solution of sublimate. The other metallic acids have been tartar emetic, sulphate of zinc, sulphate of iron, ærugo or the green oxyde of copper, and even arsenic: while practitioners of a more timid character have confined themselves to the pitch-plaster, balsam of sulphur, or decoctions of tobacco, hemlock, or the *viola tricolor*.

Most of  
these will  
answer in  
slight cases:  
but in  
severer  
cases ni-  
trate of  
silver.

In slight cases most of these applications will be found sufficient; but, in severe and obstinate cases, none of them. And hence, in every case, I have for many years confined myself to a solution of the nitrate of silver in the proportion of from six to ten grains to an ounce of distilled water, according to the age of the patient, or the irritability of his cuticle; and with this application I have never failed. It destroys the hair to its roots, gives tone to the morbid vessels, and changes their action. It often excites a slight vesication or soreness on the surface, and it is in most instances necessary to push it to this point.

Where por-  
rigo has  
become  
chronic,  
the irrita-  
tion must  
be diminish-  
ed gradu-  
ally.

Where porrigo is of long standing, and has become chronic, the irritation must be lessened gradually, and a steady use of alterants is absolutely necessary; especially in the varieties accompanied with a considerable discharge, for many writers of authority, as Pelargus\*,

\* Medicinische Jahrgänge. 1. P. 1. p. 50.

Sennert \*, Stoll †, and Morgagni ‡, have given examples of epilepsy, apoplexy, and even death itself following upon a sudden retrocession of the eruption. In the Berlin Medical Transactions there is a case or two of amaurosis produced by a metastasis of this disease §.

GEN. VI.  
SPEC. II.  
Ecpyseis  
Porrigo.  
Scabby  
scall.

### SPECIES III.

## ECPYESIS ECTHYMA.

### Papulous Scall.

PUSTULES LARGE; DISTINCT; DISTANT; SPARINGLY SCATTERED; SEATED ON A HARD, ELEVATED RED BASE; TERMINATING IN THICK, HARD, GREENISH, OR DARK-COLOURED SCABS.

ECTHYMA from ἐκθύειν, “to rage, or break forth with fury,” was used by the Greek writers synonymously with exormia, in the sense of papula: to which effect Galen “apertum est ab ἐκθύειν, quod est ἐξορμᾶν, id est erumpere, derivatum esse ἐκθύμασι, id est PAPULIS, nomen in iis quæ sponte *extuberant* in cute ||.” I have observed, however, under EXORMIA ¶, forming Genus III. of the present Order, that ecthyma has of late years been limited by the nosologists, and especially by Willan, Young, and Bateman, to the species before us, probably on account of its more papulated form, and there seems no reason for deviating from arrangement.

GEN. VI.  
SPEC. III.  
Origin of  
the specific  
term: how  
related to  
exormia.

\* Paral. ad L. V. Med. Pract. 4. 2.

† Prælect. p. 48.

‡ De Sed. et Caus. Morb. Ep. iv. Art. 3.

§ Dec. I. Vol. VII. p. 7. II. Vol. VI. p. 28.

|| In Hippocr. Lib. III. Sect. 51.

¶ Suprà, p. 545.

GEN. VI.  
SPEC. III.  
Epyeſis  
Ecthyma.  
Papulous  
ſcall.

The following are its chief varieties :

α Vulgare.

Common papulous  
ſcall.

Base bright-red ; eruption  
completed with a ſingle  
crop. Duration about four-  
teen days.

β Infantile.

Infantile papulous  
ſcall.

Base bright-red ; eruption re-  
current in ſeveral ſucceſſive  
crops, each more extenſive  
than the preceding. Found  
chiefly in weakly infants  
during the period of lacta-  
tion. Duration two or  
three months.

γ Luridum.

Lurid papulous ſcall.

Base dark-red ; elevated ; pus-  
tules larger, and more free-  
ly ſcattered, diſcharging a  
bloody or curdly ſanies.—  
Found chiefly in advanc-  
ed age. Duration ſeveral  
weeks, ſometimes months.

Melasma.  
General  
remarks  
and mode  
of treat-  
ment.

Unconta-  
gious.

Sometimes  
connected  
with the  
constitu-  
tion and  
requiring  
general  
tonics.

This laſt is the melasma of Linnéus, Vogel, and Plenck. They are all diſeaſes of debility, local or general ; and hence, whether they occur in infancy, adult life, or age, are to be cured by general tonics, pure air, and exerciſe, tepid bathing, and preparations gently ſtimulating applied externally in the form of lotions, ointments, or powders. None of them are contagious, and in this as well as in their approaching more nearly to a papulous or broad pimply character, eſpecially that of the ſmall pox, they differ eſſentially from the preceding. Nutritious food alone, with pure air and regular exerciſe, are often ſufficient for a cure. But as this ſpecies is manifeſtly dependent upon a debilitated or cachectic ſtate of the conſtitution, it is often connected with thoſe other ſymptoms which appertain to ſuch a condition, as a tumid belly, diarrhœa, and general emaciation in infants ; and dyspepsy and ſcirrhous parabysmata, or enlargements of the abdominal viſcera, in adults. Dr. Bateman has given

a very excellent coloured print of what he calls a cachectic, or fourth variety, in his Delineations, in which the scabby pustules are thickly scattered over the limbs, mimicking very closely in size and number an ordinary appearance of discrete small-pox at the time of its scabbing. It is, however, distinctly a symptomatic affection, or rather a sequel, of some long or chronic disease of an exhausting nature, and always disappears in the train of its cure.

GEN. VI.  
SPEC. III.  
Ecpyesis  
Ecthyma.  
Papulous  
scall.  
Cachectic  
variety of  
Bateman.

## SPECIES IV.

### ECPYESIS SCABIES.

#### *Itch.*

ERUPTION OF MINUTE PIMPLES, PUSTULAR, VESICULAR, PAPULAR, INTERMIXED OR ALTERNATING; INTOLERABLE ITCHING; TERMINATING IN SCABS. FOUND CHIEFLY BETWEEN THE FINGERS OR IN THE FLEXURES OF THE JOINTS; CONTAGIOUS.

THIS disease is peculiarly complex; but the specific characters now given embrace the modifications which constitute its chief varieties, and which are as follow:

GEN. VI.  
SPEC. IV.

- |                |                                |
|----------------|--------------------------------|
| α Papularis.   | Eruption of miliary, aggregate |
| Rank itch.     | pimples; with a papular,       |
|                | slightly-inflamed base, and    |
|                | vesicular apex; pustules       |
|                | scantily interspersed; tips,   |
|                | when abraded by scratch-       |
|                | ing, covered with a minute,    |
|                | globular brown scab.           |
| ε Vesicularis. | Eruption of larger and more    |
| Watry itch.    | perfect vesicles, filled with  |
|                | a transparent fluid, with an   |



GEN. VI.  
SPEC. IV.  
Ecpyesis  
Scabies,  
Itch.

γ Purulenta.  
Pocky itch.

δ Complicata.  
Complicated itch.

ε Exotica.  
Mangy itch.

uninflamed base; intermixed with pustules; at times coalescing and forming scabby blotches.

Eruption of distinct, prominent yellow pustules, with a slightly inflamed base; occasionally coalescing, and forming irregular blotches, with a hard, dry, tenacious scab.

Eruption complicated of pustular, vesicular, and papular pimples co-existing; spreading widely over the body; occasionally invading the face; sometimes confluent and blotchy.

Eruption chiefly of rank, numerous pustules with a hard, inflamed base, rendering the skin rough, and brownish; itching extreme; abrasion unlimited from excessive scratching. Produced by handling mangy animals.

All the varieties sometimes run into each other.

The above English names have been long in vulgar use, and sufficiently appropriate. Pocky itch named from the resemblance of its pustules to

That all these affections are not distinct species of a common genus, but mere varieties of a single species, is manifest from the fact that in different individuals, or under different conditions of the skin, every variety, even the mangy itch itself, will produce every other variety, while all of them in some instances co-exist, and are destroyed by the same means. The above English names for the first three are those in common or vulgar use, and it would be difficult to find names more appropriate. The pocky itch is so denominated from the resemblance of the pustules to minute small-pox, and not from any supposed connexion with syphilis. It gives the largest pimples of all the modifications, as well as the most purulent,

but it has never the hard base of either the small-pox or the ecthyma or papulous scall we have just noticed, nor has it the hard raised border or round imbedded scab of the last, and hence is easily distinguished from both. The two former varieties are far more readily confounded with some varieties of prurigo and of lichen, and especially in consequence of the black dots on the tips of the papulæ, and the long red lines common to all as produced by scratching. But they are distinguished by the greater simplicity of the itching sensation, which, however intolerable, is not combined with tingling or formication; and by their being highly contagious which the others are not. Yet from their general resemblance, all these have, by many writers, been confounded, and by others who were fully sensible of their distinction, been incorrectly described under scabies or psora as a common name.

As a *primary* disease, itch is, in every instance, the result of personal uncleanness, and an accumulation of sordes upon the skin, though the most cleanly are capable of receiving it by contact: and it always appears most readily where close air, meagre diet, and little exercise are companions of personal filth; for here, as we have already had frequent occasions of observing, the skin is more irritable, and more easily acted upon by any morbid cause. Like many other animal secretions the fluid hereby generated is contagious; and, on close intercourse, but not otherwise, and chiefly in the warmth of a common bed, or of a bed that has been slept in before by a person affected with the disease, is capable of communication. Where the cutaneous irritation hereby produced is general to the surface, and has been suffered to remain without check, or with little attention, for a long time, a sudden suppression of the irritation by a speedy cure, like the sudden suppression of a long standing ulcer or issue, is often attended with some severe internal affection; in one instance, indeed, related by Wantner, it was succeeded by mania. And in camps, and prisons, where the constitution has been debilitated by confined

GEN. VI.

SPEC. IV.

Ecpyesis

Scabies.

Itch.

small-pox, and not from any supposed connection with lues.

The first and second varieties approach some varieties of porrigo and lichen.

How distinguishable.

Itch primarily from personal uncleanness, though the cleanest may receive it by contact.

Close intercourse necessary for contagion to operate.

When chronic, the irritation it produces to be diminished only by degrees.

Under particular circumstances has assumed a malignant character.

GEN. VI.  
SPEC. IV.  
Ecpyesis.  
Scabies.  
Itch.

air, and innutritious diet, the eruption has sometimes been known to assume a malignant character; of which Ballinger gives us an example; the whole surface of the body, in the instances to which he refers, having exhibits a sordid tessellation of crusts, excoriations, and broad livid spots, with an indurated base, accompanied with fever at night and severe head-ache.

By what  
means an  
organ be-  
comes a ni-  
dus for  
worms or  
insects.

Whenever an organ is weakened in its action it is extremely apt to become a nidus for worms or insects of some kind or other to burrow in. Hence the numerous varieties of helminthia or invagination in debility of the stomach or other digestive organs; and hence the lodgement, as we have already observed, of the grubs of a minute insect, probably a species of *pulex*, in one or two of the varieties of prurigo; and hence again in gangrenous ulcers, and especially in warm climates, the appearance almost every morning of innumerable grubs or maggots, of which we have frequent examples in the wounds inflicted on the backs of the negro-slaves in the West Indies by severe flogging. A similar deposit of eggs, apparently of the genus *acar* or tick, is sometimes found in itch pustules, or in the immediate vicinity of them. And hence itch has, by Wichmann and many other writers of great intelligence, been ascribed solely to this cause\*: while others who have sought for the appearance of the grub hereby produced, but in vain, have peremptorily denied the existence of such a fact in any case†. The statement now given constitutes, however, the actual history, and readily reconciles these conflicting opinions. Such insects are not always to be traced, but they may be seen occasionally: and wherever they appear they are not a cause but a consequence of the disease.

Hence  
these some-  
times found  
in or near  
itch pus-  
tules:

but not ne-  
cessarily  
connected  
with the  
disease.

\* Wichmann, *Aetiologie der Krätze*. Hanov. 1786. Rochard, *Journ. de Med.* Tom. XII. p. 26.

† Sager, *Baldinger*, N. Maga. B. xi. p. 484.

Hartmann, *Diss. Quæstiones super Wichmanni Aetiologiâ, Scabiei*. Fr. 1789.

There are few complaints that have been treated with so many remedies, and none with so many pretended specifics. Sulphur, zinc, acids of all kinds, bay-berries, white hellebore, arsenic, alum, muriate and other preparations of quicksilver, alkali, tobacco, and tar, have all been used externally in the form of lotions or ointments; and sulphur and sulphuric acid have been given internally, and been strongly recommended both in Germany and in our own country for their success. Sulphuric acid was first used in the Prussian army in 1756, by Dr. Colthenius, chief physician; after which Professor Schroeder of Gottingen, employed it very freely and asserted that he never failed herewith to cure the itch in fourteen days at farthest\*.

GEN. VI.  
SPEC. IV.  
Ecpyesis.  
Scabies.  
Itch.  
Remedial process.  
Pretended specifics innumerable.  
Sulphuric acid internally.

Dr. Linckius, in the *Nova Acta Naturæ Curiosorum*, gives an account of an epidemic itch which raged very generally around Nuremberg about the middle of the last century, and resisted all the usual means of sulphur, lead, turpentine, arsenic, mercury, human and animal urine, chalybeate waters, lime-water, and drastic purgatives, and only yielded to diuretics urged to such an extent as to irritate the urethra with a considerable degree of pain. The medicine he employed was a subnitrate of pot-ash, obtained by deflagrating common nitre with charcoal. The first hint of this practice he received from a treatise of Mauchart. The urine hereby excreted was very fetid, and threw down a copious sediment†.

Epidemic itch,

cured only by highly irritant diuretics.

It is very possible that all of these have been successful under peculiar degrees and modifications of the complaint. For the itch is not difficult to cure, and seems only to require an application that will excite a new and more healthy action in the cutaneous vessels. The simplest and most certain cure is to be obtained by the sulphur ointment, of which that of the London College

All the above remedies may have succeeded at times, as itch is not difficult of cure.

Chief principle to be attended to.

The simplest cure by sulphur

\* See Dr. Helonich's *Dissertatio de Olei Vitriolis usu*, &c. Hal. 1762.

† *Therapeia Scabiei epidemicæ per Diuresin*, &c. Nov. Act. Nat. Cur. Tom. iv.



GEN. VI.  
SPEC. IV.  
Ecpyesis.  
Scabies.  
Itch.

alone or  
with bay-  
berries and  
sulphate of  
zinc ;  
as in Jas-  
ser's oint-  
ment.

gives as good and as simple a form as any. On the Continent they usually combine with the sulphur an equal quantity of powdered bay-berries, and of sulphate of zinc, which is mixed up into an ointment with linseed or olive oil. This form was first proposed by Jasser, and under the name of unguentum Jasserianum has maintained an unrivalled character for the last half century \*. The offensive smell of the sulphur, whether in the simple ointment or Jasser's compound preparation, is very much diminished by adding to the materials a few drops of the essence of burgamot and as much rose-water as the powders will absorb before they are mixed with the animal or vegetable oil.

Mercurial  
lotion when  
to be pre-  
ferred.

These are the safest and most effectual applications, and should be employed wherever practicable. But where there is an impracticability the most elegant mode of treatment is to be obtained by a mercurial lotion made by dissolving a drachm of muriated quick-silver in half a pint of water, and adding two drachms of crude sal ammoniac, and half an ounce of nitre. The hands are to be washed with this solution night and morning, and a little of it is to be applied with a clean sponge to the pustules in other parts.

Mode of  
application  
of the lotion  
or oint-  
ment.

About eight and forty hours steady use of this lotion or the sulphur ointment, will generally be found sufficient to effect a cure; after which the person should be well cleansed and rinsed with warm water: and it will tend much to expedite and ensure the cure if the body be in like manner exposed to a warm-bath before the curative process is entered upon, as much of the contagious matter and impacted sordes will hereby be removed, and the ointment or lotion will have a chance of taking a greater effect. Where the constitution has been influenced, aperient and alterative medicines will also be necessary, and ought not to be neglected.

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\* Schmuëher, Vermischte-chirurgische Schriften. Band. III. p.183. Frank. 1783. 8vo.

In India a pleasant and easy cure is said to be effected by wearing linen that has been dipped in juice expressed from the agreeable fruit of the bilimbi tree (*averrhoa Bilimbi*. Linn.), which has also the reputation of being an antidote in many other cutaneous disorders: but I cannot speak of its effects from any personal knowledge.

GEN. VI.  
SPEC. IV.  
Ecpyesis.  
Scabies.  
Itch.  
Juice of the  
Bilimbi-  
tree.

How far scabies may, under any circumstances, cease naturally I cannot say: we are informed, however, by Bennet, that a case which had resisted all remedies was cured by a phthisical expectoration which continued for a month\*.

Has ceased  
under an-  
other mor-  
bid action.

---

\* Young, On Consumptive Diseases, p. 171.

## GENUS VII.

## MALIS.

## Cutaneous Vermination.

THE CUTICLE OR SKIN INFESTED WITH ANIMALCULES.

GEN. VII.  
Maliasmus.  
Phthiriasis.

Extensive  
range of pa-  
rasitic ani-  
mals on  
other ani-  
mals,

and plants :

formerly  
called dod-  
ders, a term  
lately re-  
strained to  
the cuscusa  
genus of  
plants.

**MALIS** and *maliasmus* (μάλις, μαλιασμός) are Greek nouns importing cutaneous vermination. In the present system the genus is designed to include both the *malis* and *phthiriasis* of Sauvages and several other writers which are very unnecessarily divided. Common as this disease is to man, it is still more so to animals of perhaps every other class and description, from the monkey to the fish-tribes, and from these to the lowest worms. All of them are infested with parasitic and minute living creatures on their skins, shells, or scales, which afford them an asylum, and for the most part supply them with nutriment. Yet the same affection is still more common to plants; which are not only infested with parasitic plants but with parasitic animals as well. The volume of Nosology contains many curious examples of this kind which the reader may turn to at his leisure.

These external parasites, whether animal or vegetable, by our old botanical writers, were significantly called *dodders*, from a term which has lately, but improperly been restrained to a particular tribe or genus of plants to which Linnéus has given the name of *cuscusa*, a parasite found very extensively on the nettles and the wild thyme of our own wastes: but which formerly was applied to external parasitic plants of all kinds; and hence Dryden in his Fables speaks of *doddered oaks*, and in his Eneid of *doddered laurels*:

Near the hearth a laurel grew  
*Dodder'd* with age, whose boughs encompass round  
 The household gods, and shade the holy ground.

Dodders are, therefore, parasites generally, and as strictly apply to those which constitute the present genus as to any that infest the vegetable world.

Generally speaking, vermination is a proof of weakness, whether in animals or in plants; and hence the weaker the plant or the animal the more subject are they to be attacked, and the more readily to be infested.

A few instances may possibly be adduced of plants and animals in perfect health being thus haunted, but they do not oppose the general rule. The remote cause of this disease, however, is most commonly filth; for filth debilitates the cutaneous vessels in every instance by obstructing the pores of the exhalants and confining the perspirable matter till it becomes acrimonious.

The animalcules that infest mankind are the following: which will constitute so many species:

- |                    |              |
|--------------------|--------------|
| 1. MALIS PEDICULI. | LOUSINESS.   |
| 2. — PULICIS.      | FLEA-BITE.   |
| 3. — ACARI.        | TICK-BITE.   |
| 4. — FILARIÆ.      | GUINEA-WORM. |
| 5. — CESTRI.       | GADFLY-BITE. |
| 6. — GORDII        | HAIR-WORM.   |

GEN. VII.  
 Malis.  
 Cutaneous  
 vermina-  
 tion.

Vermina-  
 tion gene-  
 rally a  
 proof of  
 weakness in  
 plants or  
 animals.  
 Sometimes  
 under parti-  
 cular cir-  
 cumstances  
 found in  
 healthy  
 plants and  
 animals.

## SPECIES I.

### MALIS PEDICULI.

#### Lousiness.

CUTICLE INFESTED WITH LICE, DEPOSITING THEIR NITS  
 OR EGGS AT THE ROOTS OF THE HAIR: TROUBLESOME  
 ITCHING.

THE insects of this name that trouble our own race are  
 the two following:

GEN. VII.  
 SPEC. I.



GEN. VII.  
SPEC. I.  
Malis pedi-  
culi.  
Lousiness,

α Pediculi humani.  
Common louse.

Infestment of the *common louse*, chiefly inhabiting the head of uncleanly children, where it produces a greasy scurf or other filth; and sometimes exulceration and porrigo: occasionally migrates over the body.

Ϟ Pediculi pubis.  
Crab-louse.

Infestment of the morpio or *crab-louse*; found chiefly on the groins and eyebrows of uncleanly men: itching extreme, without ulceration.

α M. pedi-  
culi hu-  
mani.  
Common  
louse.  
Description  
and history  
from Leew-  
enhoek.

The COMMON PEDICULUS, is two well known to render any particular description necessary. Leewenhoek, who cautiously watched them, by way of experiment, on his own person, affirms that the male is furnished at the extremity of the abdomen with a sting, and that it is this sting which produces the usual irritation, the suction of the proboscis hardly seeming to produce any irksome sensation on the skin of the hand. The male is readily distinguished from the female by having the tail or tip of the abdomen rounded, which in the female is forked or bifid. The animal is produced from a small oval egg, vulgarly called a nit, which is agglutinated by its smaller end to the hair on which it is deposited. From this egg proceeds the insect complete in all its parts, and differing only from the parent animal in its size. To determine the time of pregnancy and proportion of increase this indefatigable physiologist took two females and placed them in a black silk stocking which he wore day and night that they might have the full benefit of feeding upon him. He found that in six days each laid fifty eggs without exhausting its store, and that in twenty-four days the young were capable of laying eggs themselves: and, carrying on the calculation, he estimates

Prodigious  
fecundity.

that the two females conjointly might produce eighteen thousand in two months.

The largest animals of this kind were discovered by Linnéus in the warm caverns of Falhum in Sweden. It has been observed, however, by many entomologists that those which conceal themselves in clothes, forming the *pediculus vestimentorum*, are, in some respects, a different animal from the lice of the hair, or *p. capitis*. Dr. Willan remarks that the latter lay single nits on the hairs of the head, and do not spontaneously quit the scalp or its natural covering. The former are large, flat, and whitish, and seldom appear on the head, but reside on the trunk of the body, on the limbs, and on the clothes. Their nits are conglomerate and usually deposited in the folds of linen or in other articles of dress.

The *PEDICULUS PUBIS* is distinguished by the cheliform structure of its legs, whence its name of crab-louse; its antennæ consist of five articulations. Its excrement stains the linen and appears like diluted blood. It is a frequent cause of local prurigo; for these animals burrow in the skin, and, being almost unknown among decent persons, may remain a long time unsuspected, since even an examination for the purpose will scarcely detect them. They are chiefly discoverable by their nits which may be seen attached to the basis of the hairs, the insects themselves appearing only like discolourations of the skin.

All these are bred among the inhabitants of sordid dwellings, jails, and workhouses, or who are habitually uncleanly. Monkeys, the Hottentots, and some tribes of negroes are said to eat them. The cutaneous secretion is sometimes so changed by disease, that it becomes offensive to them, and they quit the person who is labouring under it; various infectious fevers seem to produce this result.

It is affirmed by some writers that the *pediculus capitis* or *humanus*, has been found useful in epilepsies, diseases of the head, and in scrophula, and that the worst consequences have arisen from drying the little ulcera-

GEN. VII.

SPEC. I.

α *M. pediculi humanis*.

Common.

Louse.

*Pediculus vestimentorum* perhaps a different form or species.

β *M. pediculus pubis*.  
Crab-louse.

A frequent cause of local prurigo.

The common louse said to have been useful in epilepsies and scrophula:

GEN. VII.  
SPEC. I.

but commonly such  
remarks  
are only  
apologies  
for filth.

Remedial  
process.

tions they produce. In Russia and other parts of the Continent, where this kind of uncleanness is, perhaps, less attended to than in our own country, all this may have occurred; for we have already had occasion to observe, that any cutaneous irritation, whether from scabies, porrigo, or any other excitement, maintained till it has become habitual should be suppressed gradually, or we shall endanger a transfer of the morbid action to a part of far more importance. Upon the whole, however, such remarks are only apologies for filth and indolence, as we are in no want of much more effectual cutaneous irritants, where such means are called for, than can be obtained from so disgusting a source.

The most fatal poisons to all these vermin are the mercurial oxydes, staphisacre, menispermum, rue, opium, angelica, and laurel; saffron, pepper, sedum, lycopodium, pinguicula, tobacco, and the seeds of veratrum. Cleanliness itself, however, is a sufficient antidote, and a sure prophylactic. The pediculus pubis is best destroyed by calomel mixed with starch powder, and applied by a down puff.

## SPECIES II.

### MALIS PULICIS.

#### *Flea-Bite.*

CUTICLE INFESTED WITH FLEAS; OFTEN PENETRATING THE CUTIS WITH THEIR BRISTLY PROBOSCIS, AND EXCITING PUNGENT PAIN; EGGS DEPOSITED ON OR UNDER THE CUTICLE.

GEN. VII.  
SPEC. II.

THIS species offers us the two following varieties:

α *Pediculi irritantis.*  
Common flea.

Infestment of the *common*  
*flea*, with a proboscis

shorter than the body; eggs deposited on the roots of the hair, and on flannel.

GEN. VII.  
SPEC. II.  
Malis pulicis.  
Flea-bite.

♂ *Pediculi penetrantis*,  
Chiggre.

Infestment of the *chigoe* or *chiggre*, a West Indian flea, with a proboscis as long as the body; often penetrating deeply into skin, and lodging its eggs under the cuticle, particularly of the feet; producing malignant, occasionally fatal ulcers.

The COMMON FLEA infests not mankind only, but quadrupeds and birds of all kinds. It is probable that it has many varieties, but these have not been ascertained by entomologists. Contrary to the economy of the pediculus, the flea undergoes all the changes of the metamorphosing tribes of insects, being produced from an egg, which gives rise to a minute vermicle or larve, that is transformed into a chrysalis, and finishes in a winged animal. The eggs, in the summer months, take six days before they are hatched, the larve the same period before it becomes a chrysalis, the chrysalis twelve days before it assumes its perfect form: so that the entire process is completed in a little more than three weeks in the summer, though a longer period of time is consumed in the colder months. It obtains its nourishment from the juices of the animal it infests, by driving its sharp proboscis under the cuticle.

♂ M. pulicis  
irritantis.  
Common  
flea.  
Extensive  
range.  
Natural  
history.

The CHIGOE or chiggre is thus excellently described by Catesby. "It is a very small flea found only in warm climates. It is a very troublesome insect, especially to negroes and others that go barefoot and are slovenly. They penetrate the skin, under which they lay a bunch or bag of eggs, which swell to the bigness of a small pea or tare, and give great pain till taken out: to perform

♂ M. pulicis  
penetrantis.  
Chigoe or  
chiggre.  
Its description  
and  
bite.



GEN. VII.  
SPEC. II.  
♂ M. pul-  
cis pene-  
trantis.  
Chigoe or  
chiggre.

which great care is required for fear of breaking the bag which endangers mortification and the loss of a leg, and sometimes life itself. This insect, in its natural size, is not above a fourth part so big as the common flea. The egg is so small as to be scarcely discerned by the naked eye."

As these animalcules are fostered like the pediculus by filth and laziness, they are best destroyed by vigilance and cleanliness: and in the mean time most of the poisons recommended in the former case will prove effectual in the latter.

### SPECIES III.

#### MALIS ACARI.

##### Tick-Bite.

CUTICLE INFESTED WITH THE TICK; ITCHING HARASSING,  
OFTEN WITH SMARTING PAIN.

GEN. VII. THE tick insect offers us the following varieties:  
SPEC. III.

α Acari domestici.  
Domestic tick.

"Observed on the head in considerable numbers." This is not a common variety, but Dr. Young has an example, and I have introduced the variety upon his authority and in his words.

♂ Acari Scabiei.  
Itch-tick.

Infestment of the *itch-tick*; burrowing under the cuticle in or near the pustules or vesicles of the scabs in those affected.

γ *Acari autumnalis*.  
Harvest bug.

Infestment of the *harvest-bug*, less in size than the common mite; inflicting its bite in the autumn, and firmly adhering to the skin; itching intolerable, succeeded by glossy wheals.

GEN. VII.  
SPEC. III.  
*Malis acari*.  
Tick-bite.

The *acarus* is a very numerous genus of very minute insects, including, besides those enumerated above, a multitude of other species well known to every one, as a. *Ricinus* or dog-tick, a. *Siro* or mite, a. *dysentericæ* or dysentery tick, of which we have spoken already\*.

General description of *acarus*.  
Dog-tick.  
Dysentery-tick.

The first in the above varieties is probably the a. *Leucurus* of Linnéus, with a testaceous exterior found frequently in the neighbourhood of gangrenous sores, and dead bodies. The second a. *scabiei*, or *exulcerans*, for though enumerated as two by Linnéus, they are the same animal, is white with reddish legs. It burrows, not in, but near the exulcerations of the itch, as already observed under scabies, as also in the neighbourhood of other exulcerations, and adds considerably to their irritation. The harvest-bug is a globular ovate-red insect, with an abdomen bristly behind. From the glossy wheals which its bite produces it has sometimes been called **WHEAL-WORM**.

α M. *Acarus domesticus*.  
Domestic tick.  
A. *Leucurus* of Linnéus.  
β M. *Acarus scabiei*.  
Itch-tick.

The wounds inflicted by vermin of this kind are to be avoided by avoiding their haunts; or a tepid bath when we have been exposed to them. Where the punctures have taken place they are easiest relieved by a lotion composed of equal parts of the aromatic spirit of ammonia and water, which I have often found also highly serviceable in the bite of an animal that does not, indeed, harbour in the cuticle or on the skin, though he is as troublesome by his sudden and predacious sallies, I mean the gnat and the musquito-fly.

γ M. *Acarus autumnalis*.  
Harvest-bug, or wheal-worm.  
Remedial process.

\* Vol. II. p. 459.

## SPECIES IV.

## MALIS FILARIÆ.

## Guinea-Worm.

SKIN INFESTED WITH THE GUINEA-WORM; WINDING AND TURNING UNDER THE CUTICLE, FOR THE MOST PART, OF THE NAKED FEET OF WEST INDIAN SLAVES; SEVERE ITCHING, OFTEN SUCCEEDED BY INFLAMMATION AND FEVER.

GEN. VII.  
SPEC. IV.

THIS worm is found chiefly in both the Indies, most frequently in the morning dew; often twelve feet long, not thicker than a horse-hair. It should be drawn out with great caution, by means of a piece of silk tied round its head; for if, by being too much strained, the animal break, the part remaining under the skin will grow with redoubled vigour, and often occasion a fatal inflammation.

The irk  
Medini or  
vermis Me-  
dinensis of  
the Arabi-  
ans.

Well known  
to the  
Greeks,  
and their  
dracontia.

This animal is the *irk Medini* (يرقا مدني) of Avicenna, and the Arabians, literally, *vermis Medinensis*, but which has, by some means or other, been by most writers corruptly translated *nervus*, or *vena Medinensis*.

The Guinea-worm was well known to the Greek writers, who, according to Pliny, denominated it δρακοντία, (dracontia), whence the name of dracunculus which is frequently applied to it. Aëtius and Agatharcides have both given an account of this worm, as has also Paulus of Ægina,

Diagnosis.

The inflammation produced by this animal commences with an itching in the part affected, without acute pain. The part swells and inflames, and at length re-

sembles a furunculus or boil, in hardness, and when on the point of breaking, in vehement pain. Soon after the tumour has burst, the head of the worm may be seen peeping from the bottom of the sore, when it is to be cautiously laid hold of as already described. Sir James M'Gregor informs us that the native practitioners are far more expert in extracting it than Europeans: and that after a nice feel with their fingers for the body of the worm they make an incision, as nearly as they can judge, through its middle, and by nicely tying a piece of silk to each end, curl out both at the same time. Mr. Hutcheson gives an account of his having extracted one that measured three yards and a half in length\*.

GEN. VII.

SPEC. IV.

Malis filaria.

Guinea-worm.

How to be extracted.

Dexterity of native practitioners.

Great length at times.

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## SPECIES V.

### MALIS ŒSTRI.

#### Gad-fly Bite.

SKIN INFESTED WITH THE LARVÆ OF THE GAD-FLY;  
CHIEFLY BURROWING IN THE SCHNEIDERIAN MEMBRANE OF THE NOSTRILS.

THIS complaint is more common to quadrupeds than to mankind; especially to sheep, horses, and black cattle; the insect depositing its eggs in different parts of the bodies of these animals, and hence producing painful tumours, occasionally succeeded by death, from the violence of the inflammation. We sometimes, however, and in the West Indies not unfrequently, find the eggs

GEN. VII.

SPEC. V.

More common to quadrupeds than to mankind;

but sometimes found in man.

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\* Edin. Med. Essays, Vol. v. Part II, p. 309.



GEN. VII.  
SPEC. V.  
Malis cestri.  
Gad-fly  
bite.  
Exempli-  
fied.

of this insect deposited in the interior membrane of the human nostrils; accidentally inhaled with the air, or lodged by a sudden ascent of the insect itself. Mr. Kilgour of Jamaica, gives a striking example of this, though he does not indicate the insect. The patient was reduced almost to a state of madness before the appearance of a single larve ascertained the real nature of the disease. The cure was effected by an injection of tobacco decoction. Two hundred were discharged in ten days\*.

## SPECIES VI.

### MALIS GORDII.

#### ~~Hair~~-Worm.

SKIN INFESTED WITH THE HAIR-WORM; CHIEFLY INSINUATING ITSELF UNDER THE CUTICLE OF THE BACK, OR LIMBS OF INFANTS; PRODUCING PRICKING PAINS, EMACIATION, AT TIMES CONVULSIONS.

GEN. VII.  
SPEC. VI.

Morbus pilaris.

Morbus à crinone.

Nature of the disease involved in some obscurity.

THIS is the morbus pilaris of Horst, the malis à crinone of Etmuller and Sauvages.

The nature of the disease is still involved in some uncertainty, the fibrils thrown forth from the surface of the skin accompanied with the symptoms above described, are by some authors supposed to be a morbid production of real hairs; but the greater number, and among the rest Ambrose Parè, ascribe to them a distinct living principle.

\* History of a case in which worms in the nose were removed, &c. 8vo. 1782.

The disease is uncommon : but upon the whole it seems to be often produced by a species of the gordius or hair-worms ; some of which are well known to infest other animals in like manner ; and especially the cyprinus *alburnus* or bleak, which, at the time, appears to be in great agony.

Hoffman tells us that the children of Misnia are much infested with worms of this kind, which he describes as resembling black hairs lodged under the skin : and which, by a perpetual irritation, so emaciate them that they become little more than living skeletons. When the skin is warm they appear, but while cold they keep buried under its cover.

A similar disease is said by M. Bassignet to have been peculiar, in 1776, to the town of Seyne and its neighbourhood, and to have made its attack upon almost all the new-born children. In Seyne it was at that time called *cées*, a corruption of *ceddés*, a provincial term for a bristle. It appeared from the first twelve hours till the end of the first month after birth, rarely later than the last period. The symptoms were a violent itching, and general erethism so as to prevent sleep ; hoarseness, a diminution of the voice, and an inability of sucking. Friction with the hand over the body proved a certain cure, and brought forth a kind of dark rough filaments resembling hair, often not more than the twelfth of an inch in length, in some cases furnished with a minute bulb at the extremity\*.

A decoction of the *cocculus Indicus* is serviceable in this and in most of the preceding species : but perhaps the most determinate cure for the whole, is to be found in the *civadilla*, supposed to be a species of the *veratrum*, which I have already recommended in many cases. No insect or vermin of any kind is capable of resisting or living under the pungent and acrid aroma of its seeds

GEN. VII.  
SPEC. VI.  
*Malis gordii*.  
Hair-worm.  
Probable cause the gordius or hair-worm.

According to Hoffman common to children in Misnia :

to the town of Seyne in 1776, and called *cées*.

Curative process employed at Seyne.

General medical treatment. *Civadilla*.

Its destructive pungency.

\* Hist. de la Societé Royale, &c. Ann. 1776.

GEN. VII.  
SPEC. VI.  
Malis.  
gordii.  
Hair-worm.

Requires  
great cau-  
tion in its  
use.

when reduced to powder, which it is only necessary to sprinkle over the linen or bed-clothes that are thus infested. The powder, indeed, is a powerful errhine; and when tasted affects the tongue with the pungency of needles and excites a severe and protracted ptyalism. On account of this acrid and penetrating power it ought not to be used where the surface of the body is exulcerated. In porrigo, or scabby scall, it has even proved fatal: and hence it is omitted in Rosenstein's third edition of his work "On the Diseases of Children," though recommended in the two preceding.

## GENUS VIII.

## ECPHYMA.

## Cutaneous Excrescence.

SUPERFICIAL, PERMANENT, INDOLENT EXTUBERANCE;  
MOSTLY CIRCUMSCRIBED.

ECPHYMA is a Greek term from ἐκφύω “educo, egero,” in contradistinction both to *phyma* “an inflammatory tumour,” and *emphyma* “a tumour without inflammation originating below the integuments. Extuberances similar to those belonging to this genus are frequently found in the rinds of fruits, as apples and oranges, and form a peculiar character in some species of melon; none of which are produced by insects, nor are we acquainted with the immediate cause.

GEN. VIII.  
Origin of  
generic  
term.

The species of this genus are the four following :

- |    |         |            |           |
|----|---------|------------|-----------|
| 1. | ECPHYMA | CARUNCULA. | CARUNCLE. |
| 2. | —       | VERRUCA.   | WART.     |
| 3. | —       | CLAVUS.    | CORN.     |
| 4. | —       | CALLUS.    | CALLUS.   |



## SPECIES I.

## ECPHYMA CARUNCULA.

## Caruncle.

SOFT, FLESHY, OFTEN PENDULOUS, EXCRESCENCES OF THE  
COMMON INTEGUMENT.

GEN. VIII.

SPEC. I.

When  
found prin-

cipally

Ficus.

Encanthis.

THIS species is found over the surface generally and occasionally, as a sequel of lues, about the arms and sexual organs.

From its shape or position it often obtains a particular name, as *ficus*, when fig or raisin-shaped; *encanthis*, when seated on the canthus or angle of the eye.

At first  
mere cuti-  
cular tu-  
mours, but  
by degrees  
connected  
with the  
cutis, or  
subjacent  
muscles.

Differ in  
consisten-  
cy, colour,  
shape, and  
size.

These excrescences on their first formation seem to be productions of the cuticle alone; but by gradually thickening and a fresh vascularity they come at length to be connected with the skin itself, and, in some instances, even to proceed to the depth of the subjacent muscles. They are of very different degrees of hardness: being in some instances not much firmer than the parts with which they are connected: whilst in others they are found to acquire the obduracy of a rigid scirrhus. Their colour also is very various: in some cases they are of a pale white, and in others of different shades of red. In some instances they are single and in others gregarious. In many cases they are not larger than ordinary warts, but in others they are much broader and thicker.

Remedial  
process.

Where they are neither painful nor unsightly there can be no reason for attacking them, but in other cases they should be removed. Those of a soft consistency may be often destroyed by rubbing them frequently with a piece of crude sal ammoniac, or washing them with a strong solution of that salt. Savin powder is a still more

effectual escharotic. Pressure alone will also sometimes succeed when it can be fairly applied. But if none of these answer, recourse must be had to lunar caustic or the scalpel.

GEN. VIII.  
SPEC. I.  
EcpHYMA  
Caruncula.  
Caruncle.  
Treatment.

## SPECIES II.

### ECPHYMA VERRUCA.

#### Wart.

FIRM, HARD, ACRID, INSENSIBLE EXTUBERANCE OF THE COMMON INTEGUMENT: FOUND CHIEFLY ON THE HANDS.

WARTS are small sarcomata that offer the following varieties: GEN. VIII.  
SPEC. II.

- $\alpha$  Simplex. Simple and distinct: sessile or Simple Wart. pensile.
- $\beta$  Lobosa. Full of lobes and fissures. Lobed Wart.
- $\gamma$  Confluens. In coalescing clusters. Confluent Wart.

All these rise, like the caruncle, from the cuticle at first, and gradually become connected with the cutis by being supplied with minute arteries that rarely extend far into its substance, as the surface, when of any bulk, is hard, ragged, and insensible. The extreme sensibility of the base of a wart renders its connexion with a subcutaneous nerve highly probable.

Origin and progress.

It is destroyed by ligature, the knife, escharotics, or powerful astringents. Many of our common pungent plants are employed by the vulgar for the same purpose, and in various instances answer sufficiently. One of the most frequent is the celendine or *chelidonium majus*, Curative process.  
Chelido-  
nium majus  
or celen-  
dine-juice.

GEN. VIII.  
SPEC. II.  
EcpHYMA  
Verruca.  
Wart.  
Treatment.  
Pyrolig-  
neous acid.  
Savine.  
Destroyed  
by the  
gryllus ver-  
rucivorus.  
Sometimes  
disappear  
spontane-  
ously.

whose yellow acrid juice is applied to the excrescence daily or occasionally till it disappears. The pyrolig-  
neous acid, however obtained, answers the same purpose,  
as does the meloe *proscarabæus*, the liquor potassæ or  
ammoniaë, mineral acids, muriated ammonia. In Sweden  
they are destroyed by the gryllus *verrucivorus*, or wart-  
eating grasshopper, with green wings spotted with brown.  
The common people catch it for this purpose; and it is  
said to operate by biting off the excrescence, and dis-  
charging a corrosive liquor on the wound. They often  
disappear spontaneously and hence lay a foundation for  
being charmed away.

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### SPECIES III.

## ECPHYMA CLAVUS.

### Corns.

ROUNDISH, HORNY, CUTANEOUS EXTUBERANCE WITH A  
CENTRAL NUCLEUS, SENSIBLE AT ITS BASE: FOUND  
CHIEFLY ON THE TOES FROM THE PRESSURE OF TIGHT  
SHOES.

GEN. VIII.  
SPEC. III.  
Originate  
as carun-  
cles and  
warts, and  
sometimes  
approach  
ichthyiasis  
cornea.  
Sometimes  
cast annu-  
ally.  
Mode of  
treatment.

CORNS originate in the same manner as caruncles and  
warts. They are sometimes spontaneous, and gregarious,  
spreading over the whole head and body: and sometimes  
rise to a considerable height, and assume a horny ap-  
pearance. In the last case the tubercle makes a near  
approach to some of the species of the genus LEPIDOSIS,  
especially l. *Ichthyiasis* cornea, and cornigera. In the  
ninth volume of the Transactions of Natural Curiosities,  
is a case of an annual fall by a spontaneous suppuration.

The cure consists in cutting or paring the excrescence  
down nearly to its roots; and then applying some warm

resinous, or other stimulating preparation; as the juice of squills, house-leek, or purslane, or the compound Galbanum or ammoniac emplaster.

GEN. VIII.  
SPEC. III.  
EcpHYMA  
Clavus.  
Corns.  
Treatment.

## SPECIES IV.

### ECPHYMA CALLUS.

#### Callus.

CALLOUS EXTUBERANT THICKENING OF THE CUTICLE;  
INSENSIBLE TO THE TOUCH.

THIS species is found chiefly on the palms of the hands and soles of the feet as a consequence of hard labour. Among those who accustom themselves to long journeys over the burning sands of Egypt some have had their feet as indurated with a thick callus as an ox's hoof, so as to bear shoeing with iron; and in Siam such persons have been known to walk with their naked feet on red-hot iron bars.

GEN. VIII.  
SPEC. IV.  
Where chiefly seated, and how produced.  
By burning sands or other excess of heat.

This species is produced also by a frequent exposure of the hands or feet to hot water, or to mineral acids. The cuticle of the feet has been rendered so thick and insensible by the use of sulphuric acid as to endure fire without pain. This acid is hence commonly employed by professed fire-walkers, and fire-eaters, the interior of the mouth being hardened and seared in the same way as the soles of the feet.

Singular effects.  
By mineral acids, used for this purpose by fire-walkers and fire-eaters.

In the Medical Museum is a singular case of this complaint as it occurred in a young man, the cuticle of whose hands was so thickened and indurated as to render them of no use. He was by trade a dyer; and the disease was gradually brought on by cleaning brass wire, with a fluid consisting of sulphuric acid, tartar, and alum. His fingers

Singular illustration.



GEN. VIII.

SPEC. IV.

EcpHYma

Cal us.

Callus.

were so rigid from the callosity of the cuticle, that on a forcible endeavour to straighten them, blood started from every pore. As the disease was chiefly ascribed to the use of the acid, the patient was ordered to apply to his hands an emollient liniment consisting of equal parts of olive-oil and aqua-kali. After two days, one half the alkali was omitted, and the yolk of two eggs added. By means of this application, the hardened cuticle began to peel off; and a new flexible one to appear beneath; he acquired the use of his fingers by degrees, and in about two months the cure was perfected.

## GENUS IX.

### TRICHOSIS.

#### Morbid Hair.

##### MORBID ORGANIZATION OR DEFICIENCY OF HAIR.

TRICHOSIS (*τρίχωσις*) "pilare malum," is a term of Actuarius, and other Greek writers from *θριξ* "pilus." TRICHIASIS is the more common appellation; but it has often been used in a somewhat different and more limited sense. The terms athrix and distrix, which express two of the species under this genus, are evidently from the same root.

GEN. IX.  
Origin of  
generic  
name.  
Pilare  
malum.  
Trichiasis.

Hair may be regarded as a vegetation from the surface of the body; it rises from a bulbous root of an oval form which fixes in the cuticle or rete mucosum, and seems sometimes to shoot into the cutis. The separate hairs are spiral and hollow, furnished with vessels, and knotted at certain distances like some sorts of grass, and in some cases send out branches at their knots. Their roots or bulbs are found over the whole surface of the body, though they only vegetate in particular parts, for which it is not easy to assign a reason. The hairs in the stems of the roots are nourished by the gluten at its base, and as this is more copious or more fluid the stem is more succulent: when in a smaller quantity or more dense, the hair is dry, crisp, and soon falls off: when not carried to the extremities, the stems or hairs become brittle, or split. The rete mucosum furnishes the hair with its colour: and as this colour, together with the nutritive mucus of the hair, diminishes, and is at length altogether suppressed in old age, we see one reason why the hair becomes gray, and perishes.

Physiology  
of hair :  
rise like  
vegetable  
spiracles  
from bulbous  
roots  
in the  
cuticle.

Bulbs or  
roots found  
over the  
entire surface  
but only  
productive  
in particular  
parts except  
extraordinarily.  
Why hair  
becomes  
gray, and  
perishes.

GEN. IX.  
Trichosis.  
Morbid  
Hair.

Without  
nerves.

Circulation  
how main-  
tained.

Beneficial  
effects of  
combing  
the hair,  
and re-  
freshment  
often ob-  
tained by it.  
Long hair  
whether  
productive  
of debility.

Suddenly  
cutting off  
long hair  
has been in-  
jurious, and  
induced  
plethora.

Chemical  
properties  
of hair.

Black oil  
obtained  
from black  
hair; iron,  
and sul-  
phur :

as also a  
whitish

As hairs, at least in a state of health, have no more nerves than the filaments of vegetables, it is probable that the circulation is carried on in them in the same manner as in plants. By combing we free the fluid from those obstructions which must necessarily be produced by their being bent in all directions : and hereby promote a circulation through the bulb, and relieve the head from accumulations : for though the vessels of the bulb are small they are numerous\*. And we are hence enabled to account for the relief and refreshment which is often felt by a patient after the operation of combing. Long hair has been in all ages esteemed an ornament. There is no question, however, that it requires more nutriment for its support than short hair ; and some physiologists have gone so far as to doubt whether it may not hereby be injurious to the general health, as productive of debility. But there seems no real ground for such a belief, as a healthy system, like the roots or trunk of a healthy tree, will always be able without inconvenience to furnish sustenance enough for its branchy foliage. Dr. Parr, however, affirms, that suddenly cutting off long hair has to his knowledge been injurious and attended with every appearance of plethora : while very thick hair may occasionally weaken by the undue warmth and perspiration it occasions.

According to the experiments of Vauquelin, read to the Institute in 1808, human hair is not soluble in boiling water, but, when exposed to a greater temperature in Pappin's digester, it dissolves readily. From a solution of black hair, a black matter was deposited, which proved to be an oil of the consistence of bitumen, together with iron and sulphur. And as the hair of some persons has a smell approaching to that of sulphur, and especially those who have red hair, we are no longer at a loss to account for this. The same excellent chemist found that alcohol extracts from black hair a whitish,

\* Parr, Med. Dict. Art. Pilus.

and a grayish-green oil, the last of which separates as the alcohol evaporates. It is probable, therefore, that the black matter is gummy or albuminous; the white we are told resembles cetaceum in appearance though it differs in chemical affinity. Red hair affords the white matter, and instead of the grayish-green oil, an oil as red as blood. White hair contains phosphate of magnesia, affording us another proof of the greater facility with which calcareous matter is either formed or left loose in old age than in any other period of life\*; and its oil is nearly colourless. When hair becomes suddenly white from terror, Vauquelin thinks it may be owing to a sudden extrication of some acid, as the oxymuriatic acid is found to whiten black hair; but it is suggested by Parr, that this may more probably be owing to an absorption of the oil of the hair by its sulphur, as in the operation of whitening woollen cloths.

GEN. IX.  
Trichosis.  
Morbid  
Hair.  
and grayish  
green oil:  
blood red  
oil obtained  
from red  
hair.  
White hair  
from  
phosphate  
of magnesia  
whence its  
colour  
chiefly :  
though a  
white some-  
times pro-  
duced by  
other  
means.

These remarks will assist us in comprehending something of the nature of the following species of diseases which are included in the genus before us :

- |                      |                   |
|----------------------|-------------------|
| 1. TRICHOSIS SETOSA. | BRISTLY HAIR.     |
| 2. ——— PLICA.        | MATTED HAIR.      |
| 3. ——— HIRSUTIES.    | EXTRANEIOUS HAIR. |
| 4. ——— DISTRIX.      | FORKY HAIR.       |
| 5. ——— POLIOSIS.     | GRAY-HAIR.        |
| 6. ——— ATHRIX.       | BALDNESS.         |
| 7. ——— AREA.         | AREATED HAIR.     |
| 8. ——— DECOLOR.      | DISCOLOURED HAIR. |

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\* Vol. iv. p. 314.



## SPECIES I.

## TRICHOSIS SETOSA.

*Bristly Hair.*

HAIRS OF THE BODY THICK, RIGID, AND BRISTLY.

GEN. IX.  
SPEC. I.  
Hystriacis  
or Porcu-  
pine hair of  
Plenck.  
Illustrated.

THIS is the hystriacis or porcupine hair of Plenck. It is in fact a stiff corpulency of hair produced by a gross or exuberant nutriment, and has been sometimes limited to the head, sometimes to other organs, and sometimes common to the body. The remarks already offered will sufficiently account for its production.

In the fifth volume of the Philosophical Transactions, we have an extraordinary example of hair of this kind being thrown off and renewed every autumn, like the horns of the deer, and various other quadrupeds. The affection was also hereditary, for five sons exhibited the same morbid state of the hair\*.

## SPECIES II.

## TRICHOSIS PLICA.

*Matted Hair.*

HAIRS VASCULARLY THICKENED; INEXTRICABLY HARLED  
AND MATTED BY THE SECRETION OF A GLUTINOUS  
FLUID FROM THEIR ROOTS.

GEN. IX.  
SPEC. II.  
Affords a  
proof of  
vascularity  
in hair:

THIS disease affords a sufficient proof by itself, if other proofs were wanting, of the vascularity of the hairs.

\* See also Samml. Med. Wahrnehmung. Band. iv. p. 249.

Vauquelin ascribes it to a superfluous excretion of the fluid that nourishes them, but there must be something more than this: there must be also an intumescence or dilatation of the vascular tunic of the hairs, since their capacity is always augmented, and in some cases so much so as to permit the ascent of red blood; in consequence of which they bleed when divided by the scissors.

Most authors ascribe it to uncleanness, which is no doubt the ordinary exciting cause, though there seem to be others of equal efficiency. It is also very generally affirmed to be contagious, and I had hence added this character to the disease in the volume of Nosology. But, as Dr. Kerckhoffs strenuously maintains the contrary after a very minute attention to the complaint in Poland itself, and more especially after having in vain endeavoured to inoculate first himself, and then two children, from the matter issuing from the bulbs of hair pulled for this purpose from a boy who was suffering from it in the most loathsome manner, I have here withdrawn the symptom.

Dr. Kerckhoffs reduces plica to a much simpler principle than it has hitherto been described under, and strips it of many of the most formidable features by which it has been characterised; particularly its connexion with hectic fever or any idiopathic affection of the brain\*. He regards it as a mere result of the custom common among the lowest classes of the Polonese, of letting the hair grow to an immense length, of never combing, or in any other way cleaning it, and of constantly covering the head with a thick woollen bonnet or leathern cap. And hence, says he, while the rich are in general exempt from the disease, it is commonly to be met with among the poor alone, who wallow in filth and misery, and particularly among the Jews, who are proverbially negligent of their persons. He contends, in consequence, that it is no more endemic to Poland than to any other country; and

GEN. IX.  
SPEC. II.  
Trichosis  
Plica,  
Matted  
hair.

as also that  
the hairy  
tubes or  
spires are  
dilatable;  
whence an  
occasional  
ascent of  
red blood.  
Common  
cause, un-  
cleanliness.  
Whether  
contagious.  
Denied by  
Kerckhoffs.

His expla-  
nation of  
the disease.

Uncleanli-  
ness with  
him the  
only cause.

---

\* Observations Medicales, Par Jos. Rom. Louis Kerckhoffs, Médecine de l'Armée, &c. See Med. Trans. Vol. vi. Art. III.

GEN. IX.  
SPEC. II.  
Trichosis  
Plica.  
Matted  
hair.  
Illustrated.

that nothing more is necessary to effect a cure than general cleanliness, and excision of the matted hair.

The first person he saw labouring under this disease, and he gives the case as a general specimen, was a boy from fifteen to eighteen years old, in a miserably poor village in the neighbourhood of Posen: most offensively filthy, lying in a dark hole, and stinking (*puant*) beside the beasts. He had black hair, very long, very coarse and braided into thick plaits of a twelvemonth's standing. His head was covered with grease, his brain was greatly affected, and he was complaining of terrible head-aches. The medical practitioner that attended him opposed a removal of the hair from a vulgar belief that the common outlet of morbid humours being thus cut off, such humours would flow rapidly to the brain and produce apoplexy or some other cerebral affection. At length he consented that after a brisk purge the process of cutting the hair should commence, but only to be proceeded in by degrees. The length of two fingers was therefore first removed; and this producing no mischief; it was again shortened to the same extent two days afterwards: and in this manner the whole was cut off in about twenty days. After this the patient was allowed to comb his head a little and wash it with milk; a few bitters and other tonics were prescribed for him, and he was very shortly restored to perfect health.

Difficulties  
attending  
the admis-  
sion of  
Kerckhoffs'  
hypothesis.

Admitting Dr. Kerckhoffs' explanation of this disease to be correct, it is somewhat singular that the same explanation has never hitherto been given by the most intelligent and most celebrated Polish, or even German physicians; as it is also that the disease should be unknown in other countries where the hair is, in like manner, suffered to grow without cutting, and where as little attention is paid to cleanliness.

Other  
causes than  
uncleanli-  
ness assign-  
ed by many  
writers.

Hence Sinapius\*, and numerous other writers deny uncleanness to be the only, or even the ordinary cause.

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\* Paradoxa Med.

They contend for a predisposition in the habit, and affirm that under such predisposition any local accident, and a variety of affections in remote organs, may become exciting causes. In the Ephemera of Natural Curiosities is a case in which it seems to have been produced by a wound in the head \*. Vehr relates another in which it followed, together with jaundice, upon a suppression of catamenia for three months †. It is also occasionally a sequel of several of the varieties of psoriasis.

Cutting off the hair, however, though generally supposed to exasperate the disease, or to lead to some secondary evil, does not appear to produce these effects; and hence Vicat recommends the use of the scissors whenever the hairs bleed ‡. It is far better with Dr. Kerckhoffs to use them beforehand.

Though the disease has been usually confined to the hair of the scalp, it has occasionally appeared in other quarters, as in the beard, the cuticle, and even the pudendum: authorities for which are quoted in the volume of Nosology.

From the great afflux of fluids, and even of blood to the head, during this disease, it is often accompanied with hemicrania, or some other cephalalgic affection.

GEN. IX.

SPEC. II.

Trichosis

Plica.

Matted

hair.

Constitutional predisposition.

Has followed

upon a

wound in

the head;

upon jaundice,

and suppressed

catamenia:

upon psoriasis.

Hair to be

cut off, and

its removal

unattended

with mis-

chief.

Disease has

appeared in

other parts

than the

scalp.

Accompa-

nied at

times with

various

affections

of the head,

and why.

\* Dec. II. Ann. II. Obs. 1.

† Diss. Icterus fuscus cum Plicâ Polonicâ, &c. Fr. 1708.

‡ Memoire sur la Plique Polonoise Lausanne, 1775.



## SPECIES III.

## TRICHOSIS HIRSUTIES.

## Extraneous Hair.

GROWTH OF HAIR IN EXTRANEIOUS PARTS, OR SUPERFLUOUS GROWTH IN PARTS COMMON.

GEN. IX.  
SPEC. III.

Appears chiefly in bearded women; generally, perhaps, produced by deficient menstruation: but not always.

Beard found in boys, and infants. Hair produced in extraneous organs. Cause of this explained.

THE most frequent example of this misaffection is that of bearded women. In a few instances the female beard has even been bristly, thus uniting the present with a preceding species. Hippocrates ascribed hirsuties under this form to a deficient menstruation\*, whence it is occasionally met with in young women. This cause is admitted generally in modern practice; but one of the most striking cases in a young woman, that has ever occurred to the present author, was accompanied with an habitual paramenia *superflua*, under which the patient at length sunk at about forty years of age.

In like manner a beard has sometimes been found on boys †, and in a few instances on infants ‡.

Hair has often also sprouted forth from organs whence it does not grow naturally; which, however, in most instances, can be accounted for without any great difficulty by bearing in mind a remark offered in the opening of the present genus, I mean that “the roots or bulbs of hairs are found over the entire surface of the body, though they only vegetate in particular parts.” Yet Amatus Lusitanus has given us an example to which this explanation will not apply, for in this the exotic hairs grew

\* Epidem. Lib. vi. Sect. 7.

Schurig, Parthenologia, p. 185. Dresd. 1729. 4to.

† Paullini, Cent. III. Obs. 64.

‡ Eph. Nat. Cur. Dec. II. An. IV. Obs. 163. Ap. 203.

on the tongue \*, as the feathers of the toucan grow naturally. Criniti and Bose found the heart covered in the same manner. †

Of organized animal substances hair, however, seems to be originated more easily than any other: and this too without having, at least in many cases, any apparent bulb or root to shoot from. We had lately occasion when treating of PARURIA STILLATITIA, to notice their discharge from the bladder as constituting one of the causes of this complaint. So in MALIS GORDII ‡ they have been apparently solicited by friction, from different parts of the body of an infant with seeming relief to his distress. And under the genus ECCYESIS §, numerous examples have been given of their formation in various internal organs. It is on this account the hair and beard are said by writers of graver authority occasionally to grow for some time after the death of every other part of the body; of which examples may be found in Heister ||, and Camerarius ¶.

GEN. IX.  
SPEC. III.  
Trichosis  
Hirsuties.  
Extraneous  
hair.

Found on  
the tongue,  
on the  
heart.  
Hair ori-  
ginated  
more easily  
than any  
other or-  
ganized  
animal  
substance.  
Exempli-  
fied.

Whether  
continues  
to grow  
after death.

## SPECIES IV.

### TRICHOSIS DISTRIX.

#### Forky Hair.

HAIRS OF THE SCALP WEAK, SLENDER, AND SPLITTING AT  
THEIR EXTREMITIES.

THIS is a common affection, and depends upon a deficiency in the supply of proper nutriment from the bulb or

GEN. IX.  
SPEC. IV.  
Explained.

\* Cent. vi. Cur. 65.

† Pr. Hist. de Anitomenis Messenii hirsuto corde, Paris, 1525.  
Pr. Sistens historiam cordis villosi, Leips. 1771.

‡ Vol. iv. p. 654.

§ Vol. iv. p. 247.

|| Heist. Compend. Anat.

¶ Camerar. Memorab. Cent. vi. p. 47.

GEN. IX.  
SPEC. IV.  
Trichosis  
distrix.  
Forky hair.  
Remedial  
process.

root of the hair, in consequence of which the upper part of the tube becomes arid and brittle, and splits into minute filaments, as already explained in the introductory remarks to the present genus. Its cure is to be accomplished by cutting the hair short, and stimulating the roots by irritant pomatums, unguents, or oils.

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## SPECIES V.

### TRICHOSIS POLIOSIS.

#### Gray-hair.

#### HAIRS PREMATURELY GRAY OR HOARY.

GEN. IX.  
SPEC. V.  
Origin of  
specific  
term.  
Physiologi-  
cal expla-  
nation.

THE SPECIFIC term POLIOSIS is a Greek derivative from *πολὸς*, “candidus,” “canus,”—“white or hoary.”

The general principle of this diseased appearance has been explained in the introductory remarks to the present genus. The colour of the hair is derived from the rete mucosum, which secretes a very compound material for this purpose, a part of the occasional ingredients of which are iron, sulphur, lime, a grayish-green, and a blood-red oil. In the silvery white or glossy hair of young persons, the nutritive matter is, perhaps, the rete mucosum in its purest and most uncoloured state. Gray hair is produced in two ways. In one there is no colouring material whatever, except apparently a small portion of the sulphur; and in this case the hair is directly hoary, or of a yellowish or rusty white. In other circumstances the rete mucosum or nutriment of the hair, from causes already explained under the genus PAROSTIA, is loaded with calcareous matter, but deficient in its proper oil; and hence the hair is somewhat whiter, but of a dead hue, harsher, and coarser, very brittle, and apt to fall off from the roots.

White hair, probably produced by the former of these means, has been found occasionally in every stage of life; and Shenck gives a case in which it appeared on birth \*. It has sometimes been transmitted hereditarily †: and, in one or two instances, seems to have taken place from terror ‡, the spasm of the capillaries of the skin extending to the bulbs of the hair, which no longer communicated a supply of the ordinary pigment. It has for the same reason followed upon an obstinate cephalæa §, and is said to have occurred after death ||.

GEN. IX.  
SPEC. V.  
Trichosis  
Poliosis.  
Gray-hair.

## SPECIES VI.

### TRICHOSIS ATHRIX.

#### Baldness.

#### DECAY AND FALL OF THE HAIR.

THE general principle of this defect has been so fully detailed under the preceding species, and in the introductory remarks to the present genus, that it is not necessary to add any thing further.

This affection of the hair is the alopecia of Sauvages and other modern nosologists, but not that of Celsus and Galen, which is a variety of the next species. Alopecia is a Greek term derived from ἀλωπηξ “vulpes,” a fox, this animal being supposed to lose its hair and become

GEN. IX.  
SPEC. VI.

Alopecia of many authors but not of Celsus and Galen. Origin of specific term.

\* Lib. I. Obs. 3. ex Stuckio.

† Eph. Nat. Cur. Dec. II. Ann. I. Obs. 69.

‡ Camerar. Memor. Cent. II. N. 14. Doute, Ergo Canities à timore, Paris, 1657.

§ Journ. des Sçavans, 1684.

|| Eph. Nat. Cur. Dec. II. Ann. I. Obs. 69.



GEN. IX.  
SPEC. VI.  
Trichosis  
athrix.  
Baldness.  
Daus saleb  
of the Ara-  
bians.

bald sooner than any other quadruped. The Arabian writers named it from the same source (دَاءُ الثَّلَعِي) *daus-saleb*, literally "morbus vulpis." The species admits of the following varieties:

α Simplex. Bald-head. Hairs of the scalp of a natural hue; gradually dying at the bulbs, or loosened by a relaxation of the cutaneous texture.

β Calvities. Bald-crown. Hairs grey or hoary: baldness chiefly on the crown of the head; and confined to the head. Mostly common to advanced age.

γ Barbæ. Bald-beard. Decay and fall of the beard.

α T. athrix  
simplex.  
Bald-head.

The first variety is the defluvium capillorum of Senert. Whatever tends to give an established relaxation and want of tone to the cutaneous vessels becomes a cause of this affection: and it is hence a frequent sequel upon fevers of various kinds. It is also found as a symptom in tabes, phthisis, porrigo, and impetigo.

General tonics and cold bathing form the most promising treatment where it is an idiopathic affection: and where it is a secondary complaint it must follow the fortune of the disorder that gives rise to it.

β T. athrix  
calvities.  
Bald-  
crown.

The second variety proceeds from a cause precisely opposite to the preceding. Here the cutaneous secretions, instead of being too loose and relaxed are too dry and rigid: there is little nutriment afforded to the roots or bulbs of the hair, whence they become arid and brittle, particularly at the extreme point of the head or crown, and are perpetually breaking off at their origin. The cause of the whiteness or hoariness of the hair has been explained under the preceding species. Other causes than that of old age are noticed by pathologists, and have no doubt a foundation; as terror, which has sometimes operated very rapidly, insolation or exposure

of the head to the rays of the sun, unlimited sexual indulgence \*, cephalæa, and worms †.

This affection is far more common to males than to females; it is asserted by many writers that it never occurs in eunuchs ‡, and by Schenck that it never takes place in any persons before the use of sexual copulation; and hence ought not to exist in bachelors; and, provided the remark be well founded, on which I cannot speak from my own knowledge, might be employed as a test of their continence.

The most promising remedies are to be sought for in an external application of warm animal oils, and oily aromatic essences, as lavender-water.

Baldness of the beard is not a common defect: but examples of it are referred to in the volume of Nosology.

GEN. IX.  
SPEC. VI.  
6 T. athrix  
calvities.  
Bald-  
crown.  
More com-  
mon to  
males than  
females:  
said never  
to occur in  
eunuchs:  
or before  
the use of  
sexual co-  
pulation.

## SPECIES VII.

### TRICHOSIS AREA.

#### *Created Hair.*

PATCHES OF BALDNESS WITHOUT DECAY OR CHANGE OF COLOUR IN THE SURROUNDING HAIR; EXPOSED PLOTS OF THE SCALP GLABROUS, WHITE AND SHINING; SOMETIMES SPREADING AND COALESCING, RENDERING THE BALDNESS EXTENSIVE.

THIS species is taken entirely from Celsus, who gives two varieties of it almost in the following words:

GEN. IX.  
SPEC. VII.  
Species de-  
rived from  
Celsus.

\* Gilibert. *Adversus Pract. Prin.*

Merlet. *Diss. Ergo à Salacitate Calvities.* Paris, 1662.

† Paulini Lanx Sat. Dec. iv. Obs. 9.

‡ De Moor, *Diss. in Hipp. App.* vi. 28. L. B. 1736.

Schenck. L. i. Obs. 10.

GEN. IX.  
SPEC. VII.  
Trichosis  
Area.  
Areated  
hair.

α Diffluens.

Diffluent areated  
hair.

Bald plots of an indeterminate figure; existing in the beard as well as in the scalp: obstinate of cure. Common to all ages.

ς Serpens.  
Serpentine areated  
hair.

Baldness commencing at the occiput, and winding in a line not exceeding two fingers' breadth, to each ear, sometimes to the forehead: often terminating spontaneously. Chiefly limited to children.

First variety the alopecia of the Greeks.

Second variety their ophiasis.

The species is the porrigo decalvans of Bateman;

but has no real connexion with porrigo.

Remedial process.

The first variety forms the true alopecia of the Greeks, of which I have spoken already, and is so denominated by Celsus, Galen, and other Greek and Roman writers. The second is called by them ophiasis from ὄφις, *a serpent*, in consequence of the serpentine direction in which the disease trails round the head.

Dr. Bateman has described this species under the name of porrigo *decalvans*, while he admits that the surface of the scalp offers no porriginous or other eruption whatever, but "within these areae is smooth, shining, and remarkably white." "It is probable, however, he adds, *though not ascertained*, that there may be an eruption of minute aches about the roots of the hair, in the first instance, which are not permanent, and do not discharge any fluid." It must be obvious to every one that this fall of the hair has no connexion whatever with porrigo; depending upon a partial operation of the causes that we have already noticed as giving rise to the two preceding species of poliosis and athrix.

A frequent shaving of the entire scalp, with affusion of cold water, and the use of stimulant liniments, as a solution of two drachms of the oil of mace in three or four ounces of alcohol, will sometimes be found to pro-

duce a fresh crop of hair : though, in most instances, all applications are equally unavailable.

GEN. IX.  
SPEC. VII.

## SPECIES VIII.

### TRICHOSIS DECOLOR.

#### Miscoloured Hair.

##### HAIR OF THE HEAD OF A PRETERNATURAL HUE.

As the hair receives its tint from the pigment communicated to the bulbs by the rete mucosum, whatever varies the character or colour of this material, will vary also the colour of the hair. Some of the causes of such variation we shall have to notice under the ensuing genus ; but there are others which are not so easily explained. From the rete mucosum, we have already seen that the hair obtains iron and sulphur, as also the blood-red oil which is procured by digestion from the red hair, which forms a third constituent, since it does not seem from the experiments of Vauquelin, that this is a result of the iron. The grayish-green oil which this excellent chemist has been also able to extract from black and other dark kinds of hair is another distinct principle : and, from an excess or deficiency, or a peculiar combination of the colorific constituents, we are able to account for some of the extraordinary hues which the hair is occasionally found to exhibit, though others seem to elude all explanation. The chief varieties they display are the following :

GEN. IX.  
SPEC. VIII.  
General explanation :

but the  
causes not  
always  
manifest.

$\alpha$  Cærulea.

Of a blue colour\*.

\* Paulini Cent. I., Obs. 93.



GEN. IX.  
SPEC. VIII.  
Trichosis  
decolor.  
MiscoLOUR-  
ed hair.

♂ Denigrata.

γ Viridis.

δ Variiegata.

Changed from another colour to a black \*.

Of a green colour. Of which we have had very numerous examples †.

Spotted, like the hair of a leopard ‡. Of this the examples are more common than of any of the preceding varieties.

Change of  
colour  
sometimes  
sudden :

particularly  
when to a  
black.

Fever, ex-  
siccation  
and terror,  
causes.

In what  
way these  
causes operate.

Many of these singular hues are said to have followed upon some natural colour of the hair : and, in some instances, suddenly. This is particularly the case with the second variety; or that in which the hair has abruptly become black, which seems to have occurred as a result of fever, of exsiccation, and of terror. Schurig gives a case in which the beard, as well as the hair, was transformed from a white to a black §.

We have observed, under the fifth species, that one of the causes of white or rather hoary hair, is a dry shrivelled or obstructed state of its bulbs by which the colorific matter is no longer communicated. And it is possible, that as both terror and fevers, and many other violent commotions, have sometimes proved a cure for palsy, they may occasionally produce a like sudden effect upon the minute vessels of the bulbs of the hair, remove their obstruction, or arm them with new power, and thus re-enable them to throw up into the tubes of the colourless hair the proper pigment.

\* Paulini, Cent. III. Obs. 59.

† Bartholin. Hist. Anat. Paulin. Cent. I. Obs. 93.

‡ Eph. Nat. Cur. Dec. III. Ann. Obs. 184.

§ Schurig. Spermatos.

## GENUS X.

## EPICHRÓSIS.

## Macular Skin.

## SIMPLE DISCOLOURATION OF THE SURFACE.

EPICHROSIS (*ἐπιχρῶσις*), is a term common to the Greek writers, and employed to express a coloured or spotted surface of any kind. The genus is new, but it seems called for. Like the last it consists of blemishes, many of which cannot always either be cured or even palliated; but, as all these are morbid affections, the nosological system that suffers them to pass without notice is imperfect. Many of them, however, are not of serious consequence.

GEN. X.  
Origin of  
the generic  
term.

The following are the species that belong to it:

- |    |                       |                  |
|----|-----------------------|------------------|
| 1. | EPICHROSIS LEUCASMUS. | VEAL-SKIN.       |
| 2. | ———— SPILUS.          | MOLE.            |
| 3. | ———— LENTICULA.       | FRECKLES.        |
| 4. | ———— EPHELIS.         | SUN-BURN.        |
| 5. | ———— AURIGO.          | ORANGE-SKIN.     |
| 6. | ———— PÆCILIA.         | PYE-BALLED SKIN. |
| 7. | ———— ALPHOSIS.        | ALBINO-SKIN.     |

## SPECIES I.

## EPICHROSIS LEUCASMUS.

**Veal-Skin.**

WHITE, GLABROUS, SHINING, PERMANENT SPOTS, PRECEDED BY WHITE TRANSITORY ELEVATIONS OR TUBERCLES OF THE SAME SIZE ; OFTEN COALESCING AND CREEPING IN A SERPENTINE DIRECTION ; THE SUPERINCUMBENT HAIRS FALLING OFF AND NEVER RESPROUTING.

GEN. X.  
SPEC. I.  
The vitiligo  
or veal-skin  
of Willan.  
Leucasmus  
why pre-  
ferred as a  
specific  
term :

THIS is the vitiligo, or veal-skin of Willan, so called from the veal-like appearance which these spots produce on the general colour of the surface. It is common to the different parts of the body, but chiefly found about the face, neck, and ears. The term leucasmus (*λευκασμός*), importing whiteness, is merely employed instead of vitiligo to avoid confusion as Dr. Willan has used vitiligo in a sense different from that of Celsus, or of any one who preceded him.

General  
character  
and de-  
scription.

The size of these spots vary considerably, from that of a large pin's head to that of a shilling or half-a-crown, The blank and morbid whiteness remains through life, and seems to show that the patches are no longer possessed of red blood-vessels, and that the white hue of the rete mucosum alone is visible in their respective areas, exhibiting a pure white, only differing from that of death in being glossy from the action of a living principle.

## SPECIES II.

## EPICHROSIS SPILUS.

*Mole.*

BROWN, PERMANENT, CIRCULAR PATCH; SOLITARY; SOMETIMES SLIGHTLY ELEVATED, AND CRESTED WITH A TUFT OF HAIR.

THE specific term, from *σπίλος* "macula," has been long in use. The blemish is common but unimportant.

We have had much of late to observe concerning the rete mucosum, and in the ensuing species shall have again to refer to this material. We have already remarked that it is a substance which forms the second or middle of three laminæ that constitute the external integument. It is improperly called either *rete* or *mucosum*, for it is neither a net-work, nor a mucous material, being in effect nothing more than an adipose secretion of a peculiar kind, which, when black, has a considerable resemblance to the grease that is interposed between the axles and wheels of our carriages.

It is the common pigment or colouring principle of the skin, and hence differs very considerably in hue, as is sufficiently obvious in the respective individuals of the same country, but still more so in those of remote regions; giving a white or fair hue to the inhabitants of the south side of the Caucasus and their probable descendants the great body of Europeans, a black to the negroes of Africa, an olive hue to the Mongo-Tartar race, a brown to the islanders of Australasia, and a red to the native tribes of North America.

In temperate climates, and in its purest state, it is a clear glossy white, and when reddened under a delicate

GEN. X.  
SPEC. II.

Origin of the specific term.

Produced by a partial change in the rete mucosum. This substance examined physiologically.

Improperly called rete mucosum.

The common colouring principle of the skin: differing in different individuals, and especially in different regions, and giving a white or fair hue, a black, an olive, a brown, and a red.

Clear glossy white in temperate climates.



GEN. X.  
SPEC. II.  
Epichrosis  
Spilus.  
Mole.

Origin of  
moles in  
fair com-  
plexions.

cuticle, by the minute and innumerable arteries that are distributed over the surface of the body, it gives that rich but dainty tone of colour which constitutes beauty of complexion.

It sometimes happens, however, that persons who are perfectly fair in their general complexion, from an equal diffusion of this substance in its utmost purity, have a few small spots of a lighter or deeper brown in the face, limbs, or body, from an occasional dash of brown in the rete mucosum, produced by causes which it is impossible to unravel: and which, as we shall show presently, in other persons extends over the entire surface, and is consequently intermixed with the whole of the secretion: and it is this occasional dash that constitutes a spilus or mole. In treating of TRICHOSIS we observed that chemical analysis has proved that the hair, and consequently the rete mucosum which supplies it with pigment, is possessed of a certain portion of iron: and it is possible that a concentration of this mineral substance in the coloured part may constitute the colorific material. Be this as it may, we perceive, wherever these coloured spots exist, there is a greater tendency to increased action than elsewhere; and hence, we often find a slight elevation, and increased closeness of structure, and not unfrequently an enlargement of the natural down into a tuft of hairs.

Accompa-  
nied at  
times with  
a slight  
elevation,  
and tuft of  
hair ac-  
counted  
for.

Mode of  
treatment.

Moles in  
what re-  
spect dif-  
ferent from  
nævi or  
mother-  
marks.

If this reasoning be correct, alkaline lotions, (and all soaps are of this character though not sufficiently strong for the present purpose,) should form the best cosmetics. But the spots are rarely removeable by any means, and the less they are tampered with the better.

These differ essentially from nævi or genuine mother-marks, inasmuch as the latter are produced by a distention of the minute blood-vessels of the skin, so that those which should contain only colourless blood, admit the red particles, and hereby exhibit stains of different shapes and ranges, and of different shades of crimson or purple, according to the quantity of red blood that is hereby suffered to enter, or the nature of the vessels that are distended.

## SPECIES III.

## EPICHROSIS LENTICULA.

*Freckles.*

CUTICLE STIGMATISED WITH YELLOWISH-BROWN DOTS,  
RESEMBLING MINUTE LENTIL SEEDS; GREGARIOUS;  
OFTEN TRANSITORY.

LENTICULA is more generally written in modern times *lentigo*; it is here given as it occurs in Celsus. The root is the Latin term *lens* a lentil-seed. The Greek word for which is *φάνια*; and this, without a diminutive termination, was also applied to the same blemish, when the spots were of a larger size.

GEN. X.  
SPEC. III.  
*Lentigo*,  
Phacia of  
the Greeks.

Its causes are various: most commonly it is produced by an exposure to the rays of the sun: but it frequently arises without any such exposure, and is sometimes transmitted hereditarily.

Causes  
various—  
mostly in-  
solation.

The mode by which the colorific rays of the sun operate in the production of this effect we shall explain under EPHELIS or sun-burn, forming the next species. Where the remote cause is constitutional it is probably a result of the same colorific material as that to which we have just referred *spilus* or mole, existing in the rete mucosum, and operating more diffusively, though in much smaller patches. How it comes to pass that this middle layer of the exterior integument should at any time be thus interruptedly charged with a coloured pigment so as to form the freckled appearance which constitutes the present cuticular blemish, it is not easy to say, but that it has a remarkable tendency to do so is obvious, not only from the present and preceding species, but still more so from the very striking and singular patch-work

In what  
manner  
remote  
causes  
operate.

GEN. X.  
SPEC. III.  
Epichrosis  
Lenticula.  
Freckles.  
Mostly  
found in  
fair com-  
plexions and  
red hair;  
explained.

which constitutes EPICHROSIS PÆCILIA or the sixth species of the genus before us: where we shall be again under the necessity of touching upon the subject.

Freckles most frequently are found on persons of fair complexions and red hair; and, as we have already observed, that this hue of the hair is produced by a peculiar pigment derived from the rete mucosum, which gives rise to a blood-red oil that ascends into the hair-tubes, we have an additional reason for ascribing the brown, or reddish-brown freckles of the skin to a superabundance of the same pigment in the same adipose layer.

Often  
transitory.

Freckles are often transitory. They occur in many instances in great abundance in pregnant women, and disappear after lying-in, sometimes, indeed, in the latter months of pregnancy. Riedlin affirms, but upon what authority I know not, that they are a foreshadowing of a female offspring\*.

Remedial  
process.

Cosmetics are of less avail in this than in the ensuing species, but those we shall have there occasion to notice may be tried under the species before us.

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\* Lin. Med. 1695. p. 393.

## SPECIES IV.

## EPICHRYSIS EPHELIS.

**Sun-burn.**

CUTICLE TAWNY BY EXPOSURE TO THE SUN: OFTEN SPOTTED WITH DARK FRECKLES, CONFLUENT OR CO-RYMBOSE; DISAPPEARING IN THE WINTER.

EPHELIS (ἑφηλῖς,) is a term of Celsus as well as the name appropriated to the preceding species: and its real meaning is "sun-burn" or "sun-spot"—"vitium faciei solis ustione." In Celsus however, the term is used in a much wider sense, and applied to blemishes which have no connexion with sun-burning. It is here restrained to its proper signification.

The sun in hot climates, or very hot summer seasons, has a tendency to affect the colour of the skin in a two-fold manner. First by a direct affinity of its colorific rays, or those of light, with the oxygene of the animal surface, and particularly with that of the rete mucosum, in consequence of which a considerable part of the oxygene is detached and flies off, and the carbone and hydrogene, with which it was united, being freed from its constraint, enter into a new combination, and form a more or less perfect charcoal, according to the proportion in which they combine. And, secondly, by the indirect influence with which the calorific rays of the sun, or those of heat, produce upon the liver and excite it to a more abundant secretion of bile, possessing a deeper hue, and which is more copiously resorbed into the system. That a certain proportion of bile is resorbed at all times is clear from the colour of the urine and the stain which the perspirable fluid gives to clean linen: and that this proportion is

GEN. X.  
SPEC. IV.  
Origin of  
specific  
term.

Physiological explanation.  
Solar rays affect the skin in a two-fold manner: Directly by its colorific rays.

And indirectly by its calorific.



GEN. X.  
SPEC. IV.  
Epichrosis  
Ephelis.  
Sun-burn.  
Effusive  
brown thus  
produced:  
deeper  
tinged  
freckles  
that often  
accompany  
it how pro-  
duced.

greater in hot summers than in cold winters, and particularly in intertropical climates, is well known to every one who has attended to the subject.

These then are the ordinary causes of that effusive brown stain of the skin, which we denominate sun-burn. But whether the deeper spots or freckles, which so often accompany a sun-burnt skin be owing to an equal action of either of these causes, and particularly of the first, upon the rete mucosum, or to an extrication of any colouring matter, as of iron, for example, existing in the rete mucosum itself, and unequally distributed, is beyond our power to determine. Either cause is sufficient to produce such an effect, though perhaps the real cause is the latter: and we have already seen that, in the distribution of this adipose layer over the surface, and its connexion with the cuticle and the cutis, there is a frequent obstruction to a free flow of whatever colouring material may exist in it, which is in consequence accumulated in spots or patches instead of being equably diffused.

Principles  
on which  
cosmetics  
should be  
founded as  
remedies of  
sun-burn.

Vegetable  
and mineral  
acids.

Homborg's  
cosmetic.

Hartman's  
cosmetic.

Its mode of  
action.

Hence  
utility of  
spirit of  
lavender or  
other es-  
sential oils.

As sun-burn is chiefly occasioned by an inordinate separation of oxygene from the other constituent principles of the rete mucosum with which it was united, the most rational cosmetics, in this case, are those which have a tendency to bleach the skin, by containing a considerable proportion of some vegetable or mineral acid. Homborg's cosmetic, which has long been in vogue on the Continent, is a dilute solution of oxymuriate of mercury with a mixture of ox-gall. Hartmann's which has also been in high estimation, consists of a simple distillation of arum-root in water. This forms a very pungent lotion, and its object is to dilute or wash out the brown pigment by exciting an increased flow of perspirable fluid towards the surface, and to carry off a part of it by an increased action of the cutaneous absorbents. Spirit of lavender or any of the essential oils dissolved in alcohol may be employed for the same purpose: and some have used a diluted eau de luce which is also useful as an alkaline irritant. In Schroeder's Pharmacopœia there is a preparation for the same purpose which we should little

expect, and the virtues of which are not very likely to be tried in the present day: it is entitled aqua stercoris humani: but in former times dung of all kinds was a standard article in almost every *Materia Medica*, and there are few diseases for which it was not recommended by some practitioners; occasionally, indeed internally as well as externally. The general intention was that of obtaining a very pungent volatile alkali; but this we are able to do at present by far less offensive means.

GEN. X.  
SPEC. IV.  
Epichrosis  
Ephelis  
Sun-burn.  
Offensive  
alkalines  
formerly  
used.

When the hands are deeply discoloured they may often be bleached by exposing them to the fumes of sulphur.

Fumes of  
sulphur.

In drupaceous fruits, and especially those of a fine cuticle, as apples, we sometimes meet with spots and mis-colourations of the same character as moles, freckles, and sun burn; the causes of which we do not always know, though we can sometimes trace them to small punctures in the cutis by birds and insects.

Like mis-  
colourations  
and spots  
in vegetable  
fruits.

## SPECIES V.

### EPICHROSIS AURIGO.

#### Orange-Skin.

CUTICLE SAFFRON-COLOURED, WITHOUT APPARENT AFFECTION OF THE LIVER, OR ITS APPENDAGES; COLOUR DIFFUSED OVER THE ENTIRE SURFACE: TRANSIENT: CHIEFLY IN NEW-BORN INFANTS.

THIS orange hue of infants, and which is occasionally to be met with in later periods appears, as Dr. Cullen observes, to depend either on bile, not as in the usual manner excreted, but received into the blood-vessels and effused under the cuticle, or on a peculiar yellowness of the serum of the blood distinct from any connexion with

GEN. X.  
SPEC. V.  
Ordinary  
cause.

GEN. X.  
SPEC. V.  
Epichrosis  
Aurigo.  
Orange-  
skin.  
The ephelis  
lutea of  
Sauvages;  
but im-  
properly so  
called.  
Sclerotic  
tunic not  
discoloured  
in aurigo,  
but uni-  
formly in  
jaundice.

bile\*. Sauvages has rightly distinguished between this disease, as a mere cutaneous affection, and proper jaundice. In him it occurs under the name of ephelis *lutea*, an improper name, however, as the affection is not an ephelis or sun-burn; while the jaundice of infancy he calls aurigo *neophytorum*, which ought rather to be icterus *neophytorum*†.

It may in general be remarked that while the sclerotic tunic of the eyes as well as the skin is tinged with yellow in the genuine jaundice of infants, the former retains its proper whiteness in aurigo. Whence the serum derives the yellow hue it so strikingly evinces on some occasions, except from the bile, it is difficult to determine. That a certain proportion of bile exists constantly in the blood in a healthy state is manifest, as we have already observed from the colour of the urine, and the tinge given to linen by the matter of insensible perspiration: and that this proportion varies in different climates, and different seasons of the year, without producing genuine jaundice, we have observed also. And hence, infants under particular circumstances, may be subject to a like increase with a like absence of icteritious symptoms. But what those circumstances are, do not seem to be clearly known. We see nevertheless that whatever rouses the system generally, and the excretories peculiarly, readily takes off the saffron dye: and hence it often yields to a few brisk purges, and still more rapidly to an emetic.

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\* Synops. Nosol. Med. Gen. xci. 5.

## SPECIES VI.

## EPICHROSIS PÆCILIA.

**Wye-balled Skin.**

CUTICLE MARBLED GENERALLY, WITH ALTERNATE PLOTS  
OR PATCHES OF BLACK AND WHITE.

PÆCILIA (*ποικιλία*) is a term of Isocrates, from *ποικιλός*, “versicolor” “pictus diversis coloribus;” whence *Pæcile* the porch or picture-gallery of the Stoics at Athens. The species is new to nosological classification; but the morbid affection has been long known to physiologists, and ought to have had a niche in the catalogue of diseases before now.

This affection is chiefly found among negroes from an irregular secretion or distribution of the pigment which gives the black hue to the rete mucosum. In Albinoes, as we shall have occasion to observe presently, this pigment is entirely withheld, and the matter of the rete mucosum seems to be otherwise affected; in the species before us it is only irregularly or interruptedly distributed.

What the cause of this interrupted distribution consists in we know not; but in several of the preceding species of the present genus, and particularly in moles and freckles, we perceive a striking tendency to such an effect; and if we turn our attention to the animal and vegetable world around us, we shall observe it springing before us in a thousand different ways, and giving rise to an infinite diversity of the nicest and most elegant cutaneous tapestry. It is in truth, as the author has already remarked in the volume of Nosology, to the partial secretion or distribution of this natural pigment that we are indebted for all the variegated and beautiful hues

GEN. X.  
SPEC. VI.  
Origin of  
specific  
term.

Chiefly  
found  
among  
negroes—  
and why.

Physio-  
logically  
examined.  
Beautiful  
effect pro-  
duced by  
an inter-  
rupted and  
diversified  
distribution  
of the  
colouring  
matter of  
the rete  
mucosum  
in animals  
and plants.  
Illustrated.



GEN. X.  
SPEC. VI.  
Epichrosis  
Pœcilia.  
Pye-balled  
skin.

evinced by different kinds of animals and plants. It is this which gives us the fine red or violet that tinges the nose and hind-quarters of some baboons, and the exquisite silver that whitens the belly of the dolphin, and other cetaceous fishes. In the toes and tarsal membrane of ravens and turkeys, it is frequently black: in common hens and peacocks, gray: blue in the titmouse, green in the water hen, yellow in the eagle, orange in the stork, and red in some species of the scolopax. It affords that sprightly intermixture of colours which besprinkle the skin of the frog and salamander. But it is for the gay and glittering scales of fishes, the splendid metallic shells of beetles, the gaudy eye-spots that bedrop the wings of the butter-fly, and the infinitely diversified hues of the flower-garden that nature reserves the utmost force of this ever-varying pigment, and sports with it in her happiest caprices.

A diversified colour  
sometimes  
hereditary.

Pye-balled  
negroes.

The black  
pigment  
sometimes  
gradually  
carried off,  
and a black  
man be-  
comes a  
white.  
Exempli-  
fied.

In some cases, a diversified colour of the skin appears to be hereditary among mankind. Blumenbach gives an example of a Tartar-tribe, whose skin was generally spotted like the leopard's \*. Individuals thus motley coloured are commonly called pye-balled negroes, or are said to have pye-balled skins.

The Medico-Physical Society of New York, has lately published a case communicated by Dr. Emery Bissel, in which a man of the Brotherton tribe of Indians, ninety years of age, had been gradually becoming white for the last thirty years of his life. The first appearance of this change was a small white patch near the pit of the stomach, soon after an attack of acute rheumatism; which was shortly accompanied with other white spots in the vicinity that enlarged and at length intermixed. And the spread of the white hue continuing to range over the whole body, the original colour was only visible, at the time of writing, on the forehead, and fore-part of the face and neck, with a few small patches on the arm. The

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\* De Generis Hum. varietate nativâ.

skin, as it became white, was of a fine clear tint, and had nothing of the dull earthy appearance, or the livid hue observed in albinos. Whence it should seem that not merely the black or dark-coloured pigment had been absorbed and carried off, but that a fair, whitish, and glossy rete mucosum, like that secreted under the cuticle in white men, had taken its place\*.

This extraordinary change, however, is sometimes produced far more rapidly: for in the American States a black man has in a few instances had the whole of the colouring pigment carried off in the course of a severe fever, and has risen from his bed completely transformed into a white man. Büchner, on the contrary, relates the case of a white man who, on recovery from a like disorder, had his face tinged with a black hue, doubtless from a morbid secretion of a pigment the skin had never before elaborated.

A course of nitrate of silver, continued internally for some weeks, has often produced a deep tawny and uniform discolouration of the skin approaching to a black, being deepest in the parts most exposed to the light. Fourcroy, Butini, Reimarus, and many other writers, have given cases of this change; and Dr. Roget has lately published another instance in the Transactions of the Medico-Chirurgical Society.

Plenck asserts that he once saw a man with a green face, the right side of his body black, and the left yellow, produced by a previous disease: and Dr. Bateman informs us, "that, subsequent to the period of his publication, Dr. Willan had observed a variety of pityriases in children born in India and brought to this country, which commenced in a partially papulated state of the skin, and terminated in a black discolouration with slightly furfuraceous exfoliations. It sometimes affected half a limb, as the arm or leg; sometimes the fingers or toes†."

GEN. X.  
SPEC. VI.  
Epichrosis  
Pœcilia.

Pye-balled  
skin.

Hence a  
white pig-  
ment  
secreted as  
well as a  
black re-  
moved.

Such a total  
change  
sometimes  
sudden.  
Exempli-  
fied.

Sometimes  
a white  
man  
changes in  
the face to  
a black.

Diffusive  
tawny hue  
from ni-  
trate of  
silver.

Singular  
example of  
a green  
face with  
body part  
black, part  
yellow.

\* Journ. of Science and Arts, No. xii. p. 379.

† Cutaneous Diseases, p. 48.

## SPECIES VII.

## EPICHROSIS ALPHOSIS.

~~Albino-skin.~~

CUTICLE DULL WHITE: PUPILS ROSY: SIGHT WEAK, AND  
STRONGEST IN THE SHADE.

GEN. X.  
SPEC. VII.  
Species  
common to  
blacks and  
whites.

THIS species occurs not among negroes only, as commonly supposed, but among the inhabitants of Europe as well, and affords us the two following varieties:

- |                                |   |
|--------------------------------|---|
| α Æthiopica.<br>Negro albino.  | Hair white and woolly: irids<br>white. Found among negroes.                 |
| ε Europea.<br>European albino. | Hair flaxen and silky. Found<br>among Europeans and other<br>white nations. |

α E. Alpho-  
sis Æthio-  
pica.  
Negro  
albino.

The first of these varieties is by far the most striking, on account of the greater change in the colour of the skin, and the peculiar contrast it forms with the general cast of the negro-features.

Term al-  
bino whence  
derived.

History of  
the disease.

The name of albino was first employed by the Portuguese, and applied to such Moors as were born white, or rather who continued so from the time of birth, for the children of negroes have little discolouration on birth, nor for several weeks afterwards, and who, on account of this morbid hue, were regarded as monsters: and the term has since passed into our own and most other languages of the world. In these persons, however, there were other peculiarities observed besides the hue of the skin, for their hair, in all its natural quarters, was equally

white, the iris of the eyes white, and the pupil rose-coloured. This whiteness of the surface, however, is not the clear and glossy tint of the uncoloured parts of the European frame in a healthy state, but of a dead or pallid cast, something like that of leprous scales. The eyes, in consequence of the deficiency of their natural pigment, are so weak that the individuals can hardly see any object in the day, or bear the rays of the sun; though under the milder light of the moon, they see with great accuracy, and run through the deepest shades of their forests with as much ease and activity as other persons do in the brightest day-light. They are also said to be less robust than other men; and to sleep through the day and go abroad at night: both which last facts are easily accounted for, for the weakness of their sight, and the discomfort of the sun-beams to their eyes.

It was at one time a subject of inquiry whether these persons were a distinct variety of the human race, or merely instances of an occasional aberration from the ordinary laws that govern the human fabric: and the former opinion derived some support from its being found that male and female albinos, who not unfrequently intermarried, being rejected by the rest of the world, produced an offspring with the same imperfections as their own.

The question, however, has long been sufficiently set at rest, since albino children have been found produced in most parts of the world, and from parents of all tribes and colours, black and olive-hued, and red and tawny: and, since the subject has been more closely attended to, from white parents or inhabitants of Europe, as well as black or copper-coloured Africans.

It is the appearance of the characteristic albino-signs in European children, that constitutes the second of the two varieties before us. These signs are a dull or unglossy white diffused over the body, with white or flaxen hair, white irids and red pupils. The disease is rare, but we have had at least eleven examples described by

GEN. X.  
SPEC. VII.  
æ E. Alphon-  
sis Æthi-  
opica.  
Negro  
albino.

Whiteness  
of a dead or  
pallid cast.  
Individuals  
in some  
degree less  
robust than  
others.

At one time  
doubted  
whether  
albinos  
were not a  
distinct  
variety of  
man.

This ques-  
tion long  
since set at  
rest.

§ E. Alphon-  
sis Europea.  
European  
albino.  
This va-  
riety rare:  
but  
and describ-  
ed by vari-  
ous autho-  
rities:



GEN. X.  
SPEC. VII.  
E. Alphon-  
sis Europea.  
European  
albino.  
all the  
examples  
males.

different authorities to the present time. Two by de Saussure, four by Buzzi, one by Helvetius, one by Maupertius, and three by Dr. Traill. It is singular that all these are males; and still more so that the female offspring of the same families were, without an exception, destitute of the albino degeneracy. The three described by Dr. Traill were part of a family of six, the daughters of which were in every respect unaffected. How far this disorder is in Europe capable of being produced hereditarily as abroad is not known; nor, indeed, does there yet appear to have been an opportunity of forming an intermarriage between a male and a female of this kind, as not a single female has yet been discovered possessing the imperfective formation.

Constitu-  
tion deli-  
cate.

Singular  
and striking  
description  
from Traill.

The same delicacy of constitution that distinguishes the foreign or negro albino, distinguishes the European, of which we may form an estimate from Dr. Traill's account of one of the three we have already alluded to. "The oldest of these albinos," says he, "is nine years of age, of a delicate constitution, slender, but well formed both in person and in features: his appetite has always been bad; he frequently complains of a dull pain in his forehead: his skin is exceedingly fair; his hair flaxen and soft; his cheeks have very little of the rose in them. The iris and *pupil* of his eyes are of a bright-red colour, reflecting in some situations an opaline tinge. He cannot endure the strong light of the sun. When desired to look up, his eye-lids are in constant motion, and he is incapable of fixing his eye steadily on any object as is observed in those labouring under some kinds of slight ophthalmia, but in him is unaccompanied by tears. His mother says that his tears never flow in the coldest weather, but when vexed they are shed abundantly. He goes to school, but generally retires to the darkest part of it to read his lesson.—His disposition is very gentle; he is not deficient in intellect. His whole appearance is so remarkable that some years ago a person attempted to steal him, and would have succeeded in

dragging him away, had not his cries brought him assistance \*.”

The disease consists altogether in a defective secretion of the rete mucosum, which is not only without the colouring constituent principles that naturally belong to it, and particularly its power of affording a black pigment, but seems to be also untempered or imperfectly elaborated in other respects, judging from the dullness or deadness of the white hue it gives to the surface of the body, instead of the life and glossiness it diffuses in a state of perfect health. That this cutaneous layer is not altogether wanting is clear, since in such case the red vascularity of the cutis would be conspicuous through the delicate transparent cuticle, in albinos peculiarly delicate, and tinge the surface with a red instead of a white colour.

It is to this imperfection in the secretion or elaboration of the rete musosum that the delicacy or feebleness of the general frame is in all probability to be ascribed, though we may be at some loss in determining how such an effect is produced by such a cause. That the flaxen hue of the hair, and the whiteness of the irids is derived from the same source, admits, however, of no doubt, and the opinion long ago expressed by Professor Blumenbach †, that the red colour of the pupils in the two adult albinos, whom he had examined at Chamouni, was equally owing to the want of the usual black pigment, has since been confirmed by M. Buzzi of Milan, who has had an opportunity of dissecting an albino, and has proved that the pigmentum nigrum of the choroid coat, and also that portion of it which lies behind the iris, and is called uvea, were totally wanting ‡.

We have observed, under the preceding species, that

GEN. X.  
SPEC. VII.  
♂ E. Alphas  
European  
albino.  
Pathologi-  
cal expla-  
nation.

Hence prob-  
ably the  
delicacy or  
character-  
istic feeble-  
ness of the  
frame :  
and unques-  
tionably the  
hue of the  
hair and  
irids :  
as also the  
red colour  
of the  
pupils :  
first con-  
jectured by  
Blumen-  
bach, since  
ascertained  
by Buzzi.

Other  
animals  
affected

\* Nicholson's Journ. Nat. Phil. Feb. 1808.

† Med. Bibl. II. 537.

‡ Dissertazione storico-anatomica sopra una varietà particolare de  
uomini bianchi, &c. Milan, 1784.

Le Cat, Traité de la Couleur de la peau humaine.

GEN. X.  
SPEC. VII.  
6 E. Alphon-  
sis Europea.  
European  
albino.

with albino  
hue as well  
as man.  
Exempli-  
fied in dogs,  
owls, and  
rabbits.

In a spar-  
row.

other animals are as richly supplied with a rete mucosum as mankind, and that they are indebted to it for their respective colours: and, as there can be no reason why they may not at times endure a like deficiency, we have reason to expect à priori that they may occasionally exhibit proofs of the same complaint. In accordance with this reasoning, M. Blumenbach has traced this affection in many tribes, and especially in white dogs, owls, and rabbits: and Dr. Traill has lately observed a case of the same disease in a young sparrow which he accidentally shot. This seems to have been a perfect albino, with red eyes, pale reddish beak and neck, snow-white plumage, of a satin gloss on the head, neck, wing-coverts, and back. The nest from which it issued contained another young sparrow of the common colour: and when the albino bird quitted the nest, which it was seen to do a few days before it was shot, it was instantly attacked by fifty or sixty common swallows, and obliged to take refuge in a tree\*.

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\* Edin. Phil. Journ. No. iv. p. 390.

## GENERAL INDEX.

The Numerals indicate the Volume; the Figures the Page.

The Classes and Orders are distinguished by Small Capitals; and the Genera by Italics.

## A.

- Abortion, iv. 176  
 Abscess, how distinguished from Apoplex-  
   stem, ii. 243  
   ....., of the breast, ii. 278  
 Absence of mind, iii. 157  
 Abstraction of mind, iii. 161  
 Absorbent system, physiology of, iv.  
   271  
   ..... whether veins are absorb-  
   ents, iv. 277  
   ..... general effects from the  
   union of this and the secernent sys-  
   tem, iv. 283  
 Absorption in cataract, iii. 223  
 Acari malis, iv. 650  
 Acarus dysenteriae, ii. 454  
   ..... cutaneous, iv. 650  
 Acid bath, i. 380  
   ..... formic, in indigestion, i. 170  
   ..... uric, produced more copiously  
   from animal than vegetable food, iv.  
   492  
   ..... oxalic, predominant principle in  
   diabetic urine, iv. 491  
 Acidum abietis, i. 514  
 Acoroides resinifera of New Holland,  
   i. 166  
 ACROTICA, iv. 528  
 Acrotism, iii. 387  
 Acrotismus, iii. 387  
 Ædoptosis, iv. 147  
   ..... vaginæ, iv. 151  
   ..... vesicæ, iv. 152  
   ..... uteri, iv. 148  
   ..... complicata, iv. 153  
   ..... polyposa, 154  
 ÆSTHETICA, iii. 195  
 Æstus volaticus, iv. 549  
 Æthusa Cynapium, or fool's parsley, i.  
   208  
 After-pains in labour, iv. 241
- Agallochum, or lign-aloes, i. 166  
 Agenesia, iv. 127  
   ..... impotens, iv. 128  
   ..... dys-spermia, iv. 131  
   ..... incongrua, iv. 136  
 Agria, iv. 558  
 Agrypnia, iii. 458  
   ..... excitata, iii. 458  
   ..... pertæsa, iii. 461  
 Ague, ii. 94  
   ..... quotidian, ii. 99  
   ..... tertian, ii. 102  
   ..... quartan, ii. 103  
   ..... irregular, ii. 105  
   ..... complicated, ii. 106  
   ..... has raged in high grounds, while  
   low have escaped, ii. 112  
   ..... treatment of, ii. 113  
 Ague-cake, i. 412  
 Air, average of inspired, in a minute,  
   i. 444  
   ..... expired, i. 444, 449  
   ..... whether secreted by organs, iv. 423  
 Albino-skin, iv. 692  
 Algor, iii. 278  
 Alimentary canal, i. 2  
   ..... comparative length  
   of, i. 6  
   ..... DISEASES OF, i. 23  
 Alkekengi, or winter-cherry, iv. 453  
 Alopecia, iv. 633. 676  
 Alphabets, why they differ in different  
   languages, i. 496  
   ..... mostly derived from the  
   Phenician, i. 496  
   ..... Devanagari, and some  
   others not, i. 497  
 Alphos, iv. 579, 580  
 Alphosis, iv. 692  
 Alusia, iii. 135  
   ..... elatio, iii. 136  
   ..... hypochondrias, iii. 144  
 Alysmus, iii. 468



- Alyssum, III. 375  
 Amaurosis, III. 226  
 ..... varieties, III. 227  
 Ambition, ungovernable, III. 120  
 Ammoniac-magnesian phosphate of  
   the bladder, IV. 501  
 Amnesia, III. 182. 184  
 Anal hemorrhage, II. 701. 704  
 Anaphrodisia, IV. 128  
 Anas cygnus, I. 433  
 ..... olor, I. 433  
 Anasarca, IV. 359  
 ..... serosa, II. 475  
 Anemone pratensis, III. 216  
 Anetus, II. 94  
 ..... quotidianus, II. 99  
 ..... tertianus, II. 102  
 ..... quartanus, II. 103  
 ..... erraticus, II. 105  
 ..... complicatus, II. 106  
 ..... treatment of, II. 113  
 Aneurisma, II. 891  
 ..... varieties, II. 892  
 Anger, ungovernable, III. 121  
 Angelica, I. 319, 320  
 Angina polyposa, II. 348  
 Anhelation, I. 536  
 Animals, lower orders, propagable both  
   by offsets and seeds, IV. 5  
 Animation suspended, III. 551  
 Anthracia, II. 638  
 ..... pestis, II. 641  
 ..... rubula, II. 670  
 Anthrax, II. 287  
 Antigua fever, compared with Bulam,  
   II. 151  
 Antimony, glass of, cerated, II. 464  
 Antipathia, antipathy, III. 470  
 ..... sensilis, III. 471  
 ..... insensilis, III. 472  
 Anxiety, ungovernable, III. 127  
 ..... corporeal, III. 465  
 Aphis humuli, I. 292  
 Aphtha, II. 585  
 Aphrodisiacs, of little avail, IV. 129  
 Aphonia, I. 470  
 ..... elinguium, I. 471  
 ..... atonica, I. 475  
 ..... surdorum, I. 478  
 Aphoria, IV. 140  
 ..... impotens, IV. 141  
 ..... paramenica, IV. 143  
 ..... impercita, IV. 145  
 ..... incongrua, IV. 146  
 Aphis, IV. 6  
 Aphelxia, III. 156  
 ..... socors, III. 157  
 ..... intenta, III. 161  
 ..... otiosa, III. 163  
 Appetite, morbid, I. 103  
 Appetite, canine, I. 104  
 ..... depraved, I. 117  
 Apochysis, III. 219  
 Apostema, aposteme, II. 243  
 ..... how differs from abscess, II.  
   243  
 ..... commune, II. 244  
 ..... psoaticum, II. 259  
 ..... hepatis, II. 262  
 ..... Empyema, II. 264  
 ..... Vomica, II. 269  
 Apoplexia, apoplexy, III. 590  
 ..... entonic, III. 602, 603  
 ..... atonic, III. 602. 605  
 ..... sanguine, III. 601  
 ..... serous, III. 601  
 Aqua regia bath, I. 380  
 ..... obscura, III. 219  
 ..... serena, III. 219  
 Arctium Lappa, II. 888  
 Ardor, III. 277  
 Area, IV. 675  
 Areca oleracea, I. 4. 313. 322  
 ..... Malabar Nut, I. 155  
 Arnica, I. 233  
 ..... montana, III. 646  
 Arqua, III. 219  
 Arsenic, in intermittents, II. 125  
 ..... in rheumatism, II. 501  
 ..... in consumption, II. 766  
 ..... in cancer, II. 818  
 ..... in nerve-ache, III. 290  
 ..... in rabies, III. 373  
 ..... in chorea, III. 441  
 ..... in epilepsy, III. 546  
 ..... in leprosy, IV. 591  
 Artemisia santonica, I. 319  
 Arteries and veins, II. 7  
 Arthroceae, II. 934  
 Arthrosia, II. 485  
 ..... acuta, II. 488  
 ..... chronica, II. 498  
 ..... Podagra, II. 502  
 ..... Hydarthrus, II. 537  
 Arthritis, II. 485  
 Articular inflammation, II. 486  
 Arum in hemicrania, III. 491  
 Ascaris lumbricoides, I. 297  
 ..... vermicularis, IV. 10  
 Asclepias gigantea, II. 860  
 Ascites, IV. 404  
 Aspalathus canariensis, I. 136  
 Asphyxia, III. 551  
 ..... varieties of, III. 552  
 ..... how related to acrotismus,  
   III. 387  
 Asphyxy, III. 551  
 Asplenium ceterach, as a diuretic, IV.  
   449  
 Asthma, I. 548

*Asthma*, siccum, I. 555  
 ..... humidum, I. 561  
 ..... nervosum, I. 555  
*Athamanta oreoselinum*, as a diuretic,  
 IV. 449  
 ..... Menm, IV. 53  
 ..... cretensis, IV. 449  
*Atheroma*, IV. 311  
*Atmosphere* contaminated with febrile  
 matter, sometimes affects birds, II.  
 69  
*Atriplex foetida*, III. 523  
*Atrophia*, atrophy, II. 714.  
*Aura epileptica*, III. 539  
 .... podagrica, II. 521  
*Aurigo*, IV. 687  
*Aurum fulminans*, II. 568  
*Avarice*, ungovernable, III. 127  
*Azote* necessary to animal nutriment,  
 I. 5

## B.

Bacher's pills, IV. 365  
*Baker's itch*, IV. 594  
*Baldness*, IV. 665. 673, 674  
*Balfour*, his hypothesis of sol-lunar in-  
 fluence, II. 82  
*Ballismus*, III. 443  
*Balsamum carpathicum*, IV. 450  
 ..... hungaricum, IV. 450  
*Banana*, I. 4  
*Barbadoes-leg*, II. 479  
*Barbiers*, III. 451  
*Bark*, Peruvian, history of, II. 119  
*Barrenness*, IV. 140  
 ..... of impotency, IV. 141  
 ..... of mis-menstruation, IV. 143  
 ..... of irrespondence, IV. 145  
 ..... of incongruity, IV. 146  
*Bastard-pox*, II. 846  
*Beating*, sense of, in the ears, III. 249  
*Bee*, economy of, IV. 6.  
*Beet*, I. 4.  
*Beetle*, larves of, intestinal, I. 302  
 ..... grubs intestinal, I. 302  
*Bella donna* in cataract, III. 226  
 ..... amaurosis, III. 229  
*Belly-ache*, I. 177  
 ..... dropsy of, IV. 404  
*Benat-allil* (Arab.), II. 577  
*Beras* (leprosy), IV. 576. 580. 586  
*Berat* (leprosy), IV. 575, 576  
*Beriberia*, Beribery, III. 451  
 ..... origin of the name, III. 451  
*Bex*, I. 506  
 .... humida, I. 508  
 .... siccà, 516  
 .... convulsiva, 523

*Bezoar*, } I. 276  
*Bezoardus*, }  
 ..... spurious, I. 278  
*Bichat*, his hypothesis concerning the  
 mind, III. 37  
*Bildungstrieb*, IV. 22  
*Bile*, use of, I. 362  
*Bilious remittent fevers*, II. 134. 136.  
 153  
*Bimariy kodek* (Pers.), IV. 111.  
*Birds*, singing, vocal avenue, I. 433  
 ..... imitative, I. 434.  
*Bismuth*, oxyde of, in indigestion, I. 162  
*Black disease*, I. 387  
 ..... leprosy, II. 857  
 ..... vomit, I. 392.—II. 149  
 ..... water, I. 122  
*Bladder*, prolapse of, IV. 147  
 ..... vermicules discharged from,  
 IV. 455  
 ..... stone in, IV. 513  
 ..... inflammation of, II. 401  
*Bladder-bougies*, I. 353  
*Bladdery fever*, II. 603.—IV. 455  
*Blains*, IV. 603. 615  
*Blear-eye*, II. 430  
*Blebs*, water, IV. 604  
*Blenorrhœa*, IV. 76  
 ..... simplex, IV. 77  
 ..... luodes, IV. 78  
 ..... chronica, IV. 87  
*Blood*, how affected by inspiration,  
 I. 443  
 ..... modena hue of, how produced,  
 I. 444.  
 ..... scarlet hue, how produced, I.  
 444. 451  
 ..... intrinsic properties of, II. 28  
 ..... moving powers of, II. 12  
 ..... sulphur of, II. 29  
 ..... iron of, II. 29. 31  
 ..... colouring matter of, II. 30  
 ..... red particles of, II. 32  
 ..... transmits mental and corporeal  
 taints to subsequent generations, II. 34  
 ..... why supposed to be alive, II. 35  
*Bloody flux*, II. 448  
*Blow-fly*, larves of, intestinal, I. 306  
*Blue-boy*, II. 906  
*Blushing*, cause of, II. 7  
*Blush inflammatory*, II. 299  
*Boak* (common leprosy), IV. 575, 576.  
 579. 583  
*Boerhaave*, his doctrine of fevers, II. 42  
*Boil*, II. 285  
*Boletus laricis*, IV. 534  
*Bombus*, III. 249  
*Bones*, contortion of the, IV. 326  
*Bonus Henricus*, I. 351  
*Borborygmus*, I. 130

Botium, iv. 305  
 Botts intestinal, i. 302  
 Bowels, inflammation of, ii. 380  
 Brain-fever, ii. 321. 327  
 Brain, inflammation of, ii. 320  
     ..... nature of, ramifications and sub-  
         stitutes, iii. 4  
     ..... of man compared with animals,  
         iii. 11.  
     ..... generally admitted to be a gland,  
         iii. 27  
 Bread-fruit tree, i. 4  
 Bread-nut, i. 4  
 Breast-pang, suffocative, i. 582  
     ..... acute, i. 583  
     ..... chronic, i. 592  
 Breeze or gadfly larvae, i. 302  
 Breslaw remittent fever, ii. 162  
 Bright-spot leprous of the Hebrews,  
     what, iv. 575  
 Broken-wind, i. 548  
 Bronchial polypus, ii. 353  
 Bronchitis, ii. 346  
 Bronchocele, iv. 305  
 Bronchus, ii. 433  
 Brosimum alicastrum, i. 4  
 Brown, his doctrine of fevers, ii. 42  
 Brown-study, iii. 157. 163  
 Bubo, ii. 280  
 Bubukle, ii. 294  
 Buccal pouch in monkeys and other  
     animals, i. 6  
*Bucnemia*, ii. 473  
     ..... sparganosis, ii. 474  
     ..... tropica, ii. 479  
 Bulam fever, ii. 145  
     ..... its relation to the Antigua fever  
         and others, ii. 151  
 Bulge-water tree, i. 313  
 Burdock, ii. 888  
 Bursa Fabricii in birds, i. 7

## C.

Cabbage-tree, i. 4. 313  
 CACHEXIES, ii. 677  
 Caddy-fly larvae, intestinal, i. 307  
 Cadmia of Gaubins, iii. 440  
 Cajeput-tree, i. 83  
 Calcareous earth, formed or secreted  
     by all animals, i. 243  
 Calculus renal, iv. 502  
     ..... vesical, iv. 502. 513  
     ..... intestinal, i. 278  
     ..... urinary, iv. 499  
     ..... its various kinds, iv. 501. 514  
 Caligo, iii. 214  
 Callus, iv. 661

Calor mordicans in typhus, ii. 191  
 Calvities, iv. 674  
 Camphor, its sedative power against  
     the irritation of the bladder by can-  
     tharides, iv. 453  
 Cancer, ii. 802  
     ..... common, ii. 803  
     ..... whether contagious, ii. 806  
     ..... ascribed to vermicles, ii. 803  
     ..... in various parts, ii. 811  
 Cannabis sativa, i. 378  
 Capsicum, in indigestion, i. 165  
 Carbuncle, ii. 287  
     ..... eschar, ii. 289  
     ..... berry, ii. 289  
 Carbuncled face, ii. 294  
*Carcinus*, ii. 802  
     ..... vulgaris, ii. 803  
 Cardamine pratensis, iii. 439. 526  
     ..... the sisymbrium of Diosco-  
         rides, iii. 526  
 Cardiognus, ii. 892  
 Carditis, ii. 369  
 Caries, ii. 921  
     ..... of the spine, ii. 923  
 Carminatives, i. 132, 133  
 Carnevaletto delle donne, of Baglivi,  
     iii. 432  
 CARPOTICA, iv. 157  
 Caruncula, caruncle, iv. 658  
*Carus*, iii. 549  
     ..... Asphyxia, iii. 551  
     ..... Ecstasis, iii. 572  
     ..... Catalepsia, iii. 576  
     ..... Lethargus, iii. 584  
     ..... Apoplexia, iii. 590  
     ..... Paralysis, iii. 620  
 Caryophyllata, i. 237  
 Casmunar, in indigestion, i. 165  
*Catacausis*, ii. 867  
     ..... ebriosa, ii. 867  
 Catalepsy, catalepsy, iii. 576  
 Catamenia, origin and progress, iv. 42  
 Cataphora, iii. 585  
 Cataract, iii. 218  
 Catarracta, iii. 218  
     ..... varieties, iii. 220  
 Catarrh, ii. 433  
*Catarrhus*, ii. 433  
     ..... communis, ii. 435  
     ..... epidemicus, ii. 437  
     ..... caninus, ii. 442  
     ..... vesicæ, iv. 455  
 Catechu, i. 352  
 Catoche, what, iii. 581  
 Catochus, what, iii. 575, 581  
     ..... how connected with tetanus,  
         iii. 329  
 CATOTICA, iv. 350  
 Cattu schiragaam, vermifuge, i. 324

*Cauma*, II. 173  
 ..... its varieties, II. 179  
*Causus*, or burning remittent, II. 159  
 Cellular substance of organs, IV. 265  
*CENOTICA*, IV. 37  
*Cephalæa*, III. 475  
 ..... gravans, III. 476  
 ..... intensa, III. 479  
 ..... Hemicrania, III. 483  
 ..... pulsatilis, III. 485  
 ..... nauseosa, III. 486  
*Cephalitis*, II. 320  
 ..... meningica, II. 327  
 ..... profunda, II. 331  
*Cerchnus*, I. 463  
*Cesarean operation in labour*, IV. 228  
*Cevadilla*, I. 313  
*Chærophyllum sylvestre*, I. 351  
*Chalasis*, II. 791  
*Chamomile*, in indigestion, I. 168  
*Chancres*, II. 825  
*Charcoal-powder*, its use in indigestion,  
 I. 160  
*Chenopodium anthelminticum*, I. 319  
 ..... vulvaria, III. 523  
*Cherry-laurel*, I. 378  
*Chervil*, I. 351  
*Chest*, dropsy of, IV. 397  
*Chicken-pox*, II. 600  
*Child-bed fever*, II. 218  
*Chilblain*, II. 313  
*Chiggoe*, Chiggre, IV. 649  
*Chivalry*, III. 137  
*Chlorine*, III. 376  
*Chlorosis*, IV. 105  
 ..... atonica, IV. 110  
 ..... entonica, IV. 108  
*Chocolate*, butter of, I. 351, 522  
*Choke-damp*, III. 552, 564  
*Χολᾶς*, I. 247  
*Χολή*, I. 247  
*Cholera*, I. 247  
 ..... biliosa, I. 248  
 ..... flatulenta, I. 252  
 ..... spasmodica, I. 254  
 ..... epidemic, I. 254  
*Chololithus*, I. 395  
 ..... quiescens, I. 398  
 ..... means, I. 399  
*Chorea*, III. 431  
*Chronic rheumatism*, II. 498  
*Chyle*, its nature, I. 9  
 ..... how produced, I. 150  
*Chylification*, process of, I. 9  
*Chyme*, I. 150  
*Chymification*, process of, I. 9  
*Cicuta virosa*, I. 208  
*Cinchona*, history of, II. 119  
*CINETICA*, III. 300  
*Circumligratura*, II. 281  
*Clap*, IV. 78

## CLASS I. PROEM I. I

ORDER I. I. 23  
 ORD. II. I. 359  
 II. PROEM I. 429  
 ORD. I. I. 455  
 ORD. II. I. 505  
 III. PROEM II. II. 3  
 ORD. I. II. 37  
 II. II. 226  
 III. II. 544  
 IV. II. 677  
 IV. PROEM III. 3  
 ORD. I. III. 55  
 II. III. 195  
 III. III. 300  
 IV. III. 456  
 V. PROEM IV. 3  
 ORD. I. IV. 37  
 II. IV. 104  
 III. IV. 157  
 VI. PROEM IV. 265  
 ORD. I. IV. 289  
 II. IV. 350  
 III. IV. 528

*Clavus*, IV. 660  
*Climacteric disease*, II. 721  
*Climacterics*, Greek what, II. 722  
*Cloaca in birds*, I. 7  
*Clonic Spasm*, III. 394  
*Clonus*, III. 394  
 ..... pathology of, III. 395  
 ..... Singultus, III. 399  
 ..... Sternutatio, III. 402  
 ..... Palpitatio, III. 405  
 ..... Nictitatio, III. 419  
 ..... Subsultus, III. 421  
 ..... Pandiculatio, III. 423  
*Clutterbuck*, his doctrine of fever, II.  
 42  
*Cobalt in consumption*, II. 767  
*Coffee*, its use in asthma, I. 565  
 ..... sick head-ache, III. 493  
*Colebicum autumnale*, how far a speci-  
 fic in gout, II. 533  
 ..... useful in  
 dropsy, IV. 372  
*Cold*, general feeling of what, III. 278  
 .... in the head, II. 335  
*CŒLIACA*, I. 23  
*Colic*, I. 177  
 ..... of Poitou, I. 186  
*Colica*, I. 177  
 ..... cibaria, I. 198  
 ..... constipata, I. 211  
 ..... constricta, I. 214  
 ..... flatulenta, I. 209  
*Collatitious organs of digestion*, I. 7  
*Colon*, valve of, I. 6  
*Coltsfoot in scrophula*, II. 799  
*Coma vigil*, III. 587  
*Comatose spasm*, see Spasm.



- Combustibility of the body*, II. 867  
*Concoction, ancient doctrine of*, II. 44  
*Concretion, intestinal*, I. 274  
*Conessi bark*, II. 471  
*Congestion, marks of, in typhus*, II. 197  
*Constipation*, I. 218  
*Consumption*, II. 742  
     ..... varieties, II. 743  
     ..... how far affected by agues, II. 789  
*Contagion, what*, II. 62  
     ..... impure atmosphere necessary to its spread, II. 74  
     ..... laws of, II. 75  
     ..... and miasm, identity of, II. 441  
*Contortion of the bones*, IV. 326  
*Convulsio, convulsion*, III. 517  
     ..... varieties of, III. 518  
     ..... puerperal, IV. 200  
*Copaiva, balsam of*, I. 242, 351  
*Coprostasis*, I. 216  
     ..... constipata, I. 218  
     ..... obstipata, I. 222  
*Corns*, IV. 660  
*Cornea opaque*, III. 214  
*Corpora lutea, what*, IV. 13  
*Corpulency*, IV. 291  
*Coryza*, I. 456  
     ..... entonica, I. 457  
     ..... atonica, I. 459  
     ..... how related to catarrh, II. 433  
*Costiveness*, I. 216  
*Couching the eye*, III. 223  
*Cough*, I. 506  
     ..... of old age, I. 509  
     ..... whooping or convulsive, I. 523  
*Country-sickness*, III. 124  
*Cowhage*, I. 317  
*Cow-pox*, II. 591  
     ..... its varieties, II. 592  
     ..... whether produced by grease in the horse's heel, II. 598  
*Crab-louse*, IV. 647  
*Crack-brained wit*, III. 137. 139  
*Cramp*, III. 314  
*Crampus*, III. 314  
*Craziness*, III. 57  
*Credulity*, III. 182. 187  
*Crepitus*, I. 130  
*Cretinism*, IV. 338  
     ..... its relation with rickets, IV. 328  
*Crimping of cod-fish*, III. 31  
*Crinones*, IV. 654  
*Crises, febrile doctrine of*, II. 77  
     ..... of Hippocrates, II. 79  
     ..... referred to the heavenly bodies, II. 81  
*Cross-birth*, IV. 213  
*Crotophium*, III. 387  
*Crotophus*, III. 387  
*Croton Tiglium as a hydragogue*, IV. 362  
*Croup*, II. 346  
     ..... acute, II. 347  
     ..... chronic, II. 353  
*Crusta lactea*, IV. 626  
*Cubebs*, IV. 83  
*Cucumber-suppositories*, I. 353  
*Cullen, his doctrine of fever*, II. 42  
*Cutaneous vermination*, IV. 614  
*Cyania*, II. 904  
*Cycas circinalis*, I. 4  
*Cyrtosis*, IV. 326  
     ..... Rhachia, IV. 327  
     ..... Cretinismus, IV. 338  
*Cystic oxyde or calculus, of the bladder*, IV. 501  
*Cystitis*, II. 401
- D.
- Dal fil (Arab.)*, II. 479. 854  
*Dance of St. Vitus, or St. Guy*, III. 431  
*Dandelion*, I. 378  
     ..... IV. 450  
*Dandriff*, IV. 571  
*Dans saleb (Arab.)*, IV. 674.  
*Dartus, darsis*, IV. 607  
*Darwin, E. his doctrine of fevers*, II. 42  
*Day-mare*, I. 579  
     ..... sight, III. 202  
*Deaf-dumbness*, I. 478  
     ..... speech maintained and how, I. 480  
*Decay of nature*, II. 721  
*Decline*, II. 731  
*Defluxion*, II. 433, 502  
*Delirium ferox*, II. 327  
     ..... mite, II. 327  
*Delivery premature, its advantages at times*, IV. 231  
     ..... origin of the practice, IV. 231  
*Demulcents, their nature and how they act*, I. 520  
*Dentition, economy of*, I. 26  
*Dentrifices*, I. 51  
*Depression in cataract*, III. 223  
*Derbyshire-neck*, IV. 302. 305. 307  
*Despair*, III. 129  
*Despondency*, III. 129  
*Destitution of urine*, IV. 439  
*Devonshire colic*, I. 186  
*Diabetes*, IV. 458  
     ..... aquosus, IV. 460  
     ..... insipidus, IV. 460. 495  
     ..... mellitus, IV. 458. 460  
     ..... different hypotheses to account for its symptoms, IV. 465

Diabetes, sugar secreted by various organs as well in a state of health as of sickness, IV. 478  
*Diarrhœa*, I. 225  
 ..... *fusa*, I. 227  
 ..... *biliosa*, I. 228  
 ..... *mucosa*, I. 231  
 ..... *chylosa*, I. 233  
 ..... *Lienteria*, I. 235  
 ..... *serosa*, I. 236  
 ..... *tubularis*, I. 239  
 ..... *gypsata*, I. 243  
 ..... *urinary*, IV. 459  
 Diary fever, II. 84  
*Dictamnus albus*, I. 319  
*Digitalis*, how far useful in phthisis, I. 780  
 ..... in dropsy, IV. 371. 400  
 Digestion, process of, I. 8  
 ..... hypotheses concerning, I. 12  
 DIGESTIVE FUNCTION, I. 2  
 ..... ORGANS, I. 1  
*Dinus*, III. 495  
 Diplopia, III. 212  
*Dipsacus*, IV. 459  
*Dipsosis*, I. 97  
 ..... *avens*, I. 100  
 ..... *expers*, I. 102  
 Dirt-eaters of West Indies, I. 119  
 Distemper of dogs, II. 442  
 Division of the symphysis of the ossa pubis in impracticable labour, IV. 224  
*Dizziness*, III. 495  
 Dodders, IV. 644  
*Dolichos pruriens*, I. 317  
*Doronicum Pardalianches*, I. 233  
 Dotage, III. 190. 192  
*Dracunculus*, IV. 652  
 Drivelling, I. 83  
 Drop serene, III. 226  
*Dropsy*, IV. 352  
 ..... *cellular*, IV. 359  
 ..... of the head, IV. 382  
 ..... spine, IV. 394  
 ..... chest, IV. 397  
 ..... belly, IV. 404  
 ..... ovary, IV. 412  
 ..... fallopian tube, IV. 415  
 ..... womb, IV. 416  
 ..... scrotum, IV. 418  
 ..... head (acute), I. 321, 323  
 ..... *urinal*, IV. 459  
 Drowning, death from, III. 557  
 Dry gangrene, II. 917  
 Dumas, his hypothesis concerning the mind, III. 37  
 Dumbness, I. 470  
 ..... *elingual*, I. 471  
*Dysenteria*, II. 448

*Dysenteria*, how far connected with fever, II. 449  
 ..... or contagion, II. 451  
 ..... *simplex*, II. 452  
 ..... *pyrectica*, II. 458  
 Dysenteric fever, II. 458  
*Dysentery*, II. 448  
 Dyspepsia,  
 ..... *phthisis*, I. 151  
*Dysphagia*, I. 84  
 ..... *atonica*, I. 90  
 ..... *constricta*, I. 85  
 ..... *globosa*, I. 91  
 ..... *uvulosa*, I. 93  
 ..... *linguosa*, I. 94  
*Dysphagy*, I. 84  
*Dysphonia*, I. 432  
 ..... *susurrans*, I. 483  
 ..... *puberum*, I. 487  
 ..... *immodulata*, I. 489  
*Dysphoria*, III. 465  
 ..... *simplex*, III. 466  
 ..... *anxietas*, III. 468  
*Dyspnœa*, I. 536  
 ..... *chronica*, I. 538  
 ..... *exacerbans*, I. 545  
 Dys-spermia, IV. 131  
 ..... *varieties*, IV. 132  
 DYSTHETICA, II. 677

## E.

Ear-ache, II. 335  
 Earstone calculus of the bladder, IV. 501  
 Ecchymoma lymphatica, II. 475.  
 ECCRITICA, IV. 239  
*Eccyesis*, IV. 246  
 ..... *ovaria*, IV. 248  
 ..... *tubalis*, IV. 253  
 ..... *abdominalis*, 254  
*Ecphlysis*, IV. 603  
 ..... *Pompholyx*, IV. 604  
 ..... *Herpes*, IV. 606  
 ..... *Rhypia*, IV. 614  
 ..... *Eczema*, IV. 616  
*Ecphronia*, III. 57  
 ..... *Melancholia*, III. 78  
 ..... *Mania*, III. 91  
*Ecphyma*, IV. 657  
 ..... *Caruncula*, IV. 658  
 ..... *Verruca*, IV. 659  
 ..... *Clavus*, IV. 660  
 ..... *Callus*, IV. 661  
*Ecpyesis*, IV. 618  
 ..... *Impetigo*, IV. 620  
 ..... *Porrigo*, IV. 624  
 ..... *Ecthyma*, IV. 635  
 ..... *Scabies*, IV. 637  
 Ecstasis, Ecstasy, III. 572

- Ecthyma, IV. 635  
 Ectropium, II. 430.  
 Eczema, IV. 616  
 Edematous inflammation, II. 302  
 Effluvium, human, II. 61. 73  
 ..... marsh, II. 61.  
 Elatio, III. 136  
 Elephantia, II. 852. 854.  
 Elephantiasis, II. 851.—IV. 578. 588  
 ..... Arabica, II. 857  
 ..... Italica, II. 862  
 ..... Asturiensis, II. 865  
 Elephant leg, II. 479  
 ..... how differs from elephantiasis of the Greeks, II. 479  
 Elephant-skin, II. 851  
 Elephas, II. 852. 854  
 Elf-sidenne, I. 575  
 Ellis, his hypothesis of respiration, I. 445.—II. 14  
 Emaciation, II. 710  
 Emansio mensium, IV. 41  
 Empassioned excitement, III. 113  
 ..... depression, III. 123  
 Empathema, III. 110  
 ..... entonicum, III. 113  
 ..... lætitiæ, philantiæ, superbæ, gloriæ famis, iracundiæ, zelotypiæ, III. 113  
 ..... atonicum, III. 123  
 ..... varieties, III. 123  
 ..... inane, III. 133  
 Emphylysis, II. 579.  
 ..... Miliaria, II. 580  
 ..... Aphtha, II. 585  
 ..... Vaccinia, II. 591  
 ..... Varicella, II. 600  
 ..... Pemphigus, II. 603  
 ..... Erysipelas, II. 609  
 Emphyma, IV. 300  
 ..... Sarcoma, IV. 301  
 ..... Encystis, IV. 310  
 ..... Exostosis, IV. 314  
 Emphysema, IV. 423  
 ..... cellulare, IV. 426  
 ..... abdominis, IV. 430  
 ..... uteri, IV. 434  
 Empresma, II. 316  
 ..... Cephalitis, II. 320  
 ..... Otitis, II. 335  
 ..... Parotitis, II. 336  
 ..... Paristhmitis, II. 338  
 ..... Laryngitis, II. 344  
 ..... Bronchitis, II. 346  
 ..... Pneumonitis, II. 356  
 ..... Pleuritis, II. 364  
 ..... Carditis, II. 369  
 ..... Peritonitis, II. 371  
 ..... Gastritis, II. 375  
 ..... Enteritis, II. 380  
 ..... Hepatitis, II. 387  
 Empresma, Splenitis, II. 397  
 ..... Nephritis, II. 399  
 ..... Cystitis, II. 401  
 ..... Hysteritis, II. 403  
 ..... Orchitis, II. 406  
 Emprosthotonos, III. 329  
 Empycsis, II. 617  
 ..... Variola, II. 618  
 Emrods, I. 345  
 Enanthesis, II. 549  
 ..... Rosalia, II. 550  
 ..... Rubeola, II. 569  
 ..... Urticaria, II. 576  
 Encanthis, IV. 658  
 Encystis, IV. 310  
 Enecia, II. 172  
 ..... Cauma, II. 173  
 ..... Typhus, II. 182  
 ..... Synochus, II. 215  
 English melancholy, III. 149  
 ..... mercury, I. 351.  
 Entasia, III. 308  
 ..... Priapismus, III. 309  
 ..... Loxia, III. 310  
 ..... articularis, III. 312  
 ..... Systemma, III. 314  
 ..... Trismus, III. 317  
 ..... Tetanus, III. 328  
 ..... Lyssa, III. 339  
 ..... acrotismus, III. 387.  
 ENTERICA, I. 23.  
 Enteritis, II. 380  
 ..... adhæsiva, II. 381  
 ..... erythematica, II. 385  
 Enterolithus, I. 274  
 ..... Bezoardus, I. 276  
 ..... Calculus, I. 278  
 ..... Scybalum, I. 283  
 Enuresis, IV. 492  
 Epanetus, II. 133  
 ..... mitis, II. 134  
 ..... malignus, II. 136  
 ..... Hectica, II. 165  
 ..... Causus, II. 159  
 ..... asthenicus, II. 161  
 ..... flavus, II. 144  
 Ephelis, IV. 685  
 Ephemera, II. 84  
 ..... mitis, II. 85  
 ..... acuta, II. 88  
 ..... sudatoria, II. 90  
 Ephialles, I. 575  
 ..... vigilantium, I. 579  
 ..... nocturnus, I. 580  
 EPIDIDROSIS, IV. 531  
 ..... profusa, IV. 533  
 ..... cruenta, IV. 534  
 ..... partialis, IV. 536  
 ..... discolor, IV. 537  
 ..... olens, IV. 538  
 ..... arenosa, IV. 540

*Epian*, II. 670  
*Epichrosis*, IV. 679  
     ..... *Leucasmus*, IV. 680  
     ..... *Spilus*, IV. 681  
     ..... *Lenticula*, IV. 683  
     ..... *Ephelis*, IV. 685  
     ..... *Aurigo*, IV. 687  
     ..... *Pœcilia*, IV. 689  
     ..... *Alphosis*, IV. 692  
*Epigenesis*, theory of, IV. 15  
*Epilepsia*, *Epilepsy*, III. 534  
     ..... varieties of, III. 535  
*Epinyctis*, IV. 605  
*Epistaxis* (nasal hæmorrhage), II. 692.  
     703  
*Ergot*, IV. 54  
*Erosion of the skin*, II. 315  
*Eructatio*, *Eructation*, I. 130  
*ERUPTIVE FEVERS*, II. 544  
*Erysipelas*, II. 609  
     ..... *œdematosum*, II. 614  
     ..... *gangrænosum*, II. 614  
     ..... *pestilens*, II. 644  
*Erysipelatous inflammation*, II. 304  
*Erythema*, II. 299  
     ..... *œdematosum*, II. 302  
     ..... *erysipelatosum*, II. 304  
     ..... *gangrænosum*, II. 308  
     ..... *vesiculare*, II. 309  
     ..... *Pernio*, II. 313  
     ..... *Intertrigo*, II. 315  
     ..... why ulcerative rather than  
         *phlegmonous*, II. 301  
     ..... *mercuriale*, II. 312  
     ..... *volaticum*, IV. 549  
*Essera*, or *Eshera*, IV. 556  
*Esophagus*, I. 6  
*Esthiomenos*, IV. 608  
*Everted eye-lid*, II. 430  
*Evolution spontaneous in labour*, IV.  
     216  
*Exangia*, II. 891  
     ..... *Aneurisma*, II. 891  
     ..... *Varix*, II. 900  
     ..... *Cyania*, II. 904  
*EXANTHEMATICA*, II. 544  
*EXANTHEM*, II. 544  
     ..... rash, II. 549  
     ..... *ichorons*, II. 579  
     ..... *pustulous*, II. 617  
     ..... *carbuncular*, II. 638  
*EXANTHESIS*, IV. 542  
     ..... *Roseola*, IV. 542  
*Excernent system*, physiology of, IV. 265  
*Excitability of Brown*, what, II. 53  
*Excecaria Agallochum*, I. 166  
*Excrescence, cutaneous*, IV. 657  
*Excrescence genital*, IV. 147  
*Exfetation*, IV. 246  
     ..... ovarian, IV. 248  
     VOL. IV.

*Exfetation*, tubal, IV. 253  
     ..... abdominal, IV. 254  
*EXORMIA*, IV. 545  
     ..... *Strophulus*, IV. 547  
     ..... *Lichen*, IV. 550  
     ..... *Prurigo*, IV. 562  
     ..... *Milium*, IV. 567  
     ..... how distinguished from *Ec-*  
         *thyma*, IV. 545  
*Exostosis*, IV. 314  
*Expectorants*, I. 511  
     ..... in what way they act,  
         I. 511  
*Extra-uterine Fetation*, IV. 246. *See*  
     *Exfetation*.  
*Eye-lids*, twinkling of the, III. 419

## F.

*Fainting*, III. 507  
     ..... from various odours, III. 507  
*Fainting-fit*, III. 510  
*Falling-sickness*, III. 534  
*Falling down of the womb*, IV. 148  
*False inspiration*, III. 137. 140  
*False conception*, IV. 258  
*Fanaticism*, III. 137. 142  
*Fasciola*, I. 299. 312. IV. 5  
*Fasting long*, or *chronic*, I. 112  
     ..... woman of Tetbury, I. 115  
*Fat*, formed from bile, I. 19.—IV. 294  
*Fatuity*, III. 180  
     ..... *imbecility*, III. 181.  
     ..... *irrationality*, III. 190.  
*Febrifuges* possess some property not  
     yet ascertained, II. 131  
*Febris lenta nervosa*, II. 188.  
     ..... *dysenterica*, or *nova*, of Syden-  
         ham, II. 452  
     ..... *rubra* of Heberden, II. 551  
*Felon*, II. 297  
*Fern*, male, I. 322  
*Fetation extra-uterine*, IV. 246. *See*  
     *Exfetation*.  
*Fetus* has been born alive at four  
     months, IV. 177  
     ..... may live at seven, IV. 177  
*Fœu volage*, IV. 549  
*FEVERS*, II. 37  
     ..... difficulty of defining, II. 38  
     ..... genera in the present work,  
         II. 40  
     ..... *proeguminal cause*, what, II. 40  
     ..... *procatartetic*, II. 40  
     ..... *exciting cause*, II. 41  
     ..... *proximate*, II. 41  
     ..... *remote*, II. 60  
     ..... chief hypotheses of, II. 42  
     ..... by what agents excited or in-  
         fluenced, II. 66



- FEVERS, diary, II. 84**  
 ..... sweating, II. 90  
 ..... *intermittent*, II. 94  
 ..... *remittent*, II. 133  
 ..... yellow, II. 145  
 ..... Bulam, 145  
 ..... paludal, II. 145  
 ..... seasoning, II. 144  
 ..... jungle, II. 145  
 ..... ardent, II. 159  
 ..... *continued*, II. 172  
 ..... inflammatory, II. 173  
 ..... imputrid continent, II. 173  
 ..... ..... *continued*, II. 173  
 ..... sanguineous *continued*, II. 173  
 ..... hysterical, II. 188  
 ..... nervous, II. 188  
 ..... putrid, malignant, jail, camp, hospital, II. 190  
 ..... synochal, II. 215  
 ..... puerperal, or child-bed, II. 218  
 ..... peritoneal, II. 218  
 ..... **ERUPTIVE**, II. 544  
 ..... miliary, II. 580  
 ..... bladdery, II. 603  
**Fibrinous calculus of the bladder, IV. 501**  
**Fibre, nervous, III. 8. 28**  
 ..... irritable, III. 25  
**Fibrous substance of organs, IV. 265**  
**Ficus, IV. 658**  
**Fidgets, III. 466**  
**Fièvre matelotte, II. 145**  
**Filaria, IV. 652**  
**Filix mas, I. 322**  
**Fish-skin, IV. 597**  
**Flavours, how influenced at different times, and under different circumstances, III. 266**  
**Flatulency, I. 129**  
**Flatus, I. 129**  
**Flea-bite, IV. 648**  
**Flesh-fly, larvae of, intestinal, I. 306**  
**Flexibility of the bones, IV. 321**  
**Flooding, IV. 186. 239**  
**Fluids, sexual diseases affecting the, IV. 37**  
**Fluke-worm, I. 299.—IV. 5**  
 ..... found in the liver, I. 407  
**Fluttering of the heart, III. 406**  
**Flux, I. 225**  
 ..... bloody, II. 448  
 ..... of aqueous urine, IV. 492  
**Food, small quantity often demanded, I. 113**  
 .... water sufficient food for some animals, I. 113  
 .... air sufficient, I. 113  
**Fool's parsley, I. 208**  
**Folly, III. 191, 192**  
**Forgetfulness, III. 182. 184**  
 ..... singular examples of, III. 186  
**Fragile vitreum, IV. 319**  
**Fragilitas ossium, IV. 319**  
**Fragility of the bones, IV. 318**  
**Frambæsia, II. 670**  
**Fraxinella, I. 319.**  
**Freckles, IV. 683**  
**Fret, II. 315**  
**Frogs, singular procreation of, IV. 9**  
**Frost-bite, II. 313. 913**  
**Fundament, falling down of, } I. 355**  
 ..... prolapse of, }  
**Fungi, a common cause of surfeit, I. 207**  
 ..... springing up nightly in gangrenous limbs, I. 295  
**Fungus hæmatodes, II. 929**  
**Furunculus, II. 285**  
**Fusible calculus of the bladder, IV. 501.**
- G.**
- Gadfly larvae, I. 302.—IV. 653**  
**Galactia, IV. 93**  
 ..... præmatura, IV. 94  
 ..... defectiva, IV. 97  
 ..... depravata, IV. 99  
 ..... erratica, IV. 101  
 ..... virorum, IV. 102  
**Gallantry romantic, III. 137**  
**Gall-bladder, wanting in many animals, I. 363**  
**Le Gallois, his experiments, III. 31**  
**Gall-stone, I. 395**  
 ..... passing of, I. 399  
**Ganglion, IV. 311**  
**Ganglions of the brain, what, III. 13**  
**Gangræna, II. 908**  
 ..... sphacelus, II. 909  
 ..... ustilaginea, II. 914  
 ..... necrosis, II. 917  
 ..... caries, II. 920  
**Gangrenous inflammation, II. 308**  
**Garden-lettuce, II. 361**  
**Gasses, inhalation of, I. 571**  
**Gastric juice, discovery of, I. 13**  
 ..... quantity of, I. 13  
 ..... quality of, I. 13  
 ..... other powers, I. 14, 15  
**Gastritis, II. 375**  
 ..... adhæsiva, II. 376  
 ..... erythematica, II. 379  
**Generative function, IV. 3**  
 ..... machinery of the, IV. 4  
 ..... process of, IV. 5  
 ..... different hypotheses of, IV. 18  
 ..... difficulties accom-

- panying the subject of generation,  
iv. 23. 25
- GENETICA, iv. 37
- Geoffroya, i. 313
- Geum urbanum, i. 237
- Ginseng, whether an aphrodisiac, iv.  
130
- Glanders in horses, ii. 443.—iv. 80
- Glaucedo, iii. 217
- Glaucosis, iii. 317
- Gleet, iv. 87
- Glottis, i. 430
- ..... air how rendered sonorous in,  
i. 431
- ..... capable of supplying the  
tongue's place, i. 437
- Gluttony, i. 104
- Goggle-eye, iii. 236
- Goggles, iii. 236
- Goitre, iv. 305
- Gonorrhœa, iv. 76
- Gordius, intestinal, i. 304
- ..... cuticular, iv. 654
- Gout, ii. 502
- ..... origin of term, ii. 502
- ..... its varieties, 505
- ..... how far refrigerants may be em-  
ployed, ii. 515. 517. 520
- ..... reputed specifics, 528
- ..... compression and percussion, ii.  
536
- Granulation, ii. 251
- Grass-hopper, wart-eating, iv. 660
- Gratiola officinalis, iv. 374
- Gravedo of Celsus, ii. 335
- Gray hair, iv. 665. 672
- Great-pox, ii. 825
- Green-sickness, iv. 105
- Grief ungovernable, iii. 129
- Grocer's Itch, iv. 623
- Grog-blossoms, ii. 294
- Groundsel, its use in sickness of the  
stomach, i. 144. 414
- Gryllus verrucivorus, its power in des-  
troying warts, iv. 660
- Guinea-worm, iv. 652
- Gum, yellow, of New Holland, i. 166
- ..... of infants, i. 385
- Gum-boil, ii. 273
- Gums, excrescent, i. 67
- ..... scurvy of, i. 69
- Gutta seu Juncetum dolor, ii. 503
- ..... obscura, iii. 219
- ..... serena, iii. 219
- Gymnastic medicine, ii. 781.—iii. 442

## H.

- HÆMATICA, ii. 37
- Hæmoptysis, ii. 695. 764
- Hæmatemesis, ii. 697. 704

- Hæmaturia, ii. 698. 704
- Hæmorrhagia, ii. 686
- ..... entonica, ii. 687
- ..... atonica, ii. 703
- Hair-worm, intestinal, i. 304
- ..... cutaneous, iv. 654
- Hair, morbid, iv. 663
- ..... matted or plaited, iv. 666
- ..... gray, iv. 672
- ..... bristly, iv. 666
- Hallucination, iii. 135
- Hanging, death from, iii. 557
- Hardness of hearing, iii. 250
- Hare-brained passion, iii. 133
- Harmattan, ii. 65
- Harvest-bug, iv. 651
- Head, dropsy of, iv. 382
- Heud-ache, iii. 475
- ..... stupid, iii. 476
- ..... chronic, iii. 479
- ..... sick, iii. 486
- ..... throbbing, iii. 485
- ..... spasmodic, iii. 486
- Hearing, how far it exists in different  
animals, iii. 18
- Hearing, morbid, iii. 239
- ..... acute, iii. 241
- ..... hardness of, iii. 248
- ..... perverse, iii. 245
- ..... double, iii. 247
- ..... illusory, iii. 248
- ..... varieties of, iii. 249
- Heart, organization of, ii. 5
- ..... how far it may leap for joy, ii. 6
- ..... fluttering of, iii. 406
- ..... throbbing of, iii. 406
- Heart-burn, i. 121
- ..... ache ungovernable, iii. 129
- Heat, general feeling of, how produced,  
iii. 277
- Heat-eruption, iv. 616, 617
- Hectic fever, ii. 165
- Hectica, ii. 165
- Hedge-hyssop, iv. 374
- Helix hortensis, iv. 5
- Hellebore, how far a specific in gout,  
ii. 533
- ..... black, as a hydragogue, iv.  
364
- Hemeralopia, iii. 200
- Hemicrania, iii. 483
- Helminthia, i. 290
- ..... alvi, i. 297
- ..... erratica, i. 304
- ..... podicis, i. 301
- Hemiplegia, iii. 626
- Hemorrhage, ii. 686
- ..... entonic or active, ii. 687
- ..... varieties of entonic, ii.  
687

*Hemorrhage*, atonic, II. 703  
 ..... varieties, II. 703, 704  
*Hemorrhoids*, I. 345  
*Hemp seeds*, in jaundice, I. 378  
*Hen-blindness*, III. 204  
*Hepatitis*, II. 387  
 ..... *acuta*, II. 395  
 ..... *chronica*, II. 395  
*Herb bennet*, I. 237  
*Hermaphrodites*, IV. 5  
*Hernia humoralis*, II. 406  
 ..... *carnosa*, IV. 305  
*Herpes*, IV. 606  
*Hesitation in speech*, I. 492  
*Hiccough*, III. 399  
*Hirsuties*, IV. 670  
*Hirudo viridis*, IV. 5  
*Hirudo sanguisuga*, intestinal, I. 308  
*Hives*, II. 600  
*Hoffmann*, his doctrine of fevers, II. 42  
*Holy fire*, II. 312  
*Home-sickness*, III. 124  
*Honey-dew*, what, I. 292  
*Hooping-cough*, I. 523  
*Hordeolum*, II. 284  
*Horns*, never grow after castration, IV. 14  
*Horse hair-worm*, intestinal, I. 304  
*Horse-leech*, intestinal, I. 308  
*Hour-glass contraction of the womb*, IV. 241  
*Human Understanding*, Locke's Essay on, examined and eulogized, III. 44  
 ..... analysis of, III. 47  
*Humoral opacity of the eye*, III. 217  
*Hunger*, sensation of, how accounted for, I. 98  
*Hyarthrus*, II. 537  
*Hyderus (diabetes)*, IV. 459, 495  
*Hydra*, IV. 5  
*Hydrargyria*, I. 74.—II. 312  
*Hydrocele*, IV. 418  
*Hydrometra*, IV. 416  
*Hydrophobia*, III. 339  
 ..... without rabies, III. 340  
*Hydrops*, IV. 351  
 ..... *cellularis*, IV. 359  
 ..... *capitis*, IV. 382  
 ..... *spinæ*, IV. 394  
 ..... *thoracis*, IV. 397  
 ..... *abdominis*, IV. 404  
 ..... *ovariorum*, IV. 412  
 ..... *tubalis*, IV. 415  
 ..... *uteri*, IV. 416  
 ..... *scroti*, IV. 418  
 ..... *matellæ*, IV. 495  
*Hyoid bone*, I. 429  
*Hypochondriasis*, III. 144  
 ..... its varieties, III. 146  
*Hypochondrism*, III. 144

*Hypochondrism*, its varieties, III. 146  
*Hypochyma*, III. 219  
*Hypoehysis*, III. 219  
*Hysteria*, III. 528  
 ..... *fœminina*, III. 529  
 ..... *masculina*, III. 529  
*Hysterics*, III. 528  
*Hysteritis*, II. 403  
 ..... *simplex*, II. 403  
 ..... *puerperarum*, II. 404

## I &amp; J.

*Jaundice*, yellow, I. 361  
 ..... *biliary*, I. 365  
 ..... *gall-stone*, I. 371  
 ..... *spasmodic*, I. 372  
 ..... of infants, I. 385  
 ..... *black*, I. 387. 389  
 ..... *green*, I. 387. 389  
*Iceland liver-wort*, II. 776  
*Icterus*, I. 361  
 ..... *cholæus*, I. 365  
 ..... *chololithicus*, I. 371  
 ..... *spasmodicus*, I. 372  
 ..... *hepaticus*, I. 383  
 ..... *infantum*, I. 385  
*Icthyiasis*, *Icthyosis*, IV. 597  
*Ideas*, what, III. 47  
 ..... of sensation, III. 47  
 ..... reflection, III. 48  
 ..... objective and subjective, III. 48  
 ..... *complex*, III. 48  
 ..... *association of*, III. 51  
*Idiotism*, III. 191, 192  
*Ignis sacer of Celsus*, II. 310  
*Jealousy*, ungovernable, III. 121  
*Jimmerat (Arab.)*, II. 656  
*Ileac passion*, I. 178  
*Ileus*, I. 178  
*Illusion*, III. 135  
*Imbecility*, mental, III. 181  
*Impetigo*, IV. 620  
*Impostume in the head*, II. 274  
*Impotency*, male, IV. 128  
 ..... barrenness of, IV. 141  
 IMPREGNATION, DISEASES AFFECTING THE, IV. 157  
 ..... physiology of, IV. 158  
*Inability to beget offspring*, IV. 127  
 ..... to conceive offspring, IV. 140  
 ..... species of, IV. 127  
*Incarnation*, II. 251  
*Incongruity*, copulative, IV. 136  
*Inconstancy*, III. 188  
*Incontinence of urine*, IV. 492  
*Incubus*, I. 575  
*Indian-pink*, I. 324  
*Indigestion*, I. 146

**Inflammation, general, of Fordyce, II.**  
 174  
 ..... edematous, II. 302  
 ..... erysipelatous, II. 304  
 ..... gangrenous, II. 308  
 ..... vesicular, II. 309  
 ..... of the brain, II. 320  
 ..... throat, II. 338  
 ..... kidneys, II. 399  
 ..... larynx, II. 344  
 ..... lungs, II. 356  
 ..... pleura, II. 364  
 ..... heart, II. 369  
 ..... stomach, II. 375  
 ..... bowels, II. 380  
 ..... liver, II. 387  
 ..... spleen, II. 397  
 ..... bladder, II. 401  
 ..... womb, II. 403  
 ..... testicles, II. 406  
 ..... eyes, II. 408  
 ..... iris, II. 415  
 ..... articular, II. 485  
**Inflammations, II. 226**  
 ..... pathology of, II. 227  
 ..... proximate cause of, II.  
 229  
 ..... remote causes of, II.  
 233  
 ..... healthy, II. 234  
 ..... unhealthy, II. 234  
 ..... adhesive, II. 236  
 ..... ulcerative, II. 236  
 ..... always tend to the sur-  
 face, II. 238  
 ..... resolution of, what, II.  
 240  
 ..... suppurative, II. 236,  
 245  
 ..... process of,  
 II. 247  
**Inflammatory fever, II. 173**  
 ..... its varieties, II.  
 179  
 ..... blush, II. 299  
**Inflation, IV. 423**  
 ..... cellular, IV. 426  
 ..... tympanic, IV. 430  
 ..... of the womb, IV. 434  
**Influenza, II. 437**  
 ..... its order of recurrence, II.  
 446  
**Insanity, III. 57**  
 ..... pathology of, III. 60  
**Insanity, proximate cause, III. 71**  
 ..... whether more common to  
 England than other countries, III. 75  
 ..... whether an increasing mala-  
 dy, III. 75  
**Inoculation for cow-pox, II. 594**  
 ..... small-pox, II. 632

**Inoculation for plague, II. 650**  
**Insensibility of touch, III. 280**  
 ..... complicated with  
 insensibility of other senses, III. 280  
**Inspiration, false, III. 137**  
**Instinct, what, II. 35, 36**  
**INTELLECT, DISEASES AFFECTING THE,**  
 III. 55  
**Intellectual principle, III. 33**  
**Intermarriages between near relations,**  
 wisdom of restraints divine and hu-  
 man upon, IV. 36  
**Intermittent Fever, II. 94**  
 ..... quotidian, II. 99  
 ..... tertian, II. 102  
 ..... irregular, II. 105  
 ..... complicated, II. 106  
 ..... treatment of, II.  
 113  
**Intestines, organ of, I. 6**  
**Introsusception, I. 180**  
**Invermation, I. 290**  
**Ionthus, II. 291**  
 ..... Varus, II. 291  
 ..... corymbifer, II. 294  
**Joy, ungovernable, III. 115**  
**Iris, inflammation of, II. 415**  
 .... (herpes), IV. 612  
**Irk Medini (Guinea-worm), IV. 652**  
**Irrationality, III. 190**  
**Ischuria, IV. 443**  
**Itch, IV. 637**  
 .... baker's, IV. 594  
 .... complicated, IV. 638  
 .... grocer's, IV. 623  
 .... pocky, IV. 638  
 .... rank, IV. 637  
 .... watery, IV. 637  
 .... mangy, IV. 638  
**Itch-tick, IV. 650**  
**Judam (Arab.), II. 854**  
**Juzam (Arab.), II. 854**

## K.

**Kibe, II. 313**  
**Kidneys, inflammation of, II. 399**  
**Kin-cough, or kind-cough, I. 523**  
**King's evil, II. 792**  
**Knife-eaters, I. 120**  
**KOIAIA, I. 23**  
**Kouba or kuba (Arab.), IV. 576**  
**Krummholzöhl, vermifuge, I. 315**

## L.

**Labour, morbid, IV. 190**  
 ..... atonic, IV. 192  
 ..... unpliant, IV. 195  
 ..... varieties of, IV. 196



- Labour, complicated*, iv. 203  
 ..... perverse, iv. 213  
 ..... varieties of, iv. 214  
 ..... impracticable, iv. 220  
 ..... multiply, iv. 233  
 ..... sequential, iv. 238  
 ..... premature, iv. 176  
 ..... show, iv. 73  
*Lacerta aquatica*, intestinal, i. 308  
*Lachrymose ophthalmia*, ii. 410  
*Lacteals*, organ of, i. 8  
*Lagnesis*, iv. 118  
 ..... *Salacitas*, iv. 118  
 ..... *Furor*, iv. 123  
*Lallatio*, i. 501  
*Lambdacismus*, i. 501  
*Land-scurvy*, ii. 875  
*Lappa*, ii. 888  
*Laryngeal suffocation*, i. 532  
*Laryngitis*, ii. 344  
*Laryngismus*, i. 532  
 ..... *stridulus*, i. 533  
*Larynx*, i. 430  
 ..... of birds, i. 432  
 ..... *stridulous constriction* of, i. 533  
*Lascivious madness*, iv. 123  
*Laughing*, how produced, i. 443  
*Lauro-cerasus*, *see* *Prunus*  
*Lawrence*, his hypothesis concerning life and a living principle, iii. 40  
*Lax*, i. 225  
*Lead*, subacetate of in hemorrhages, ii. 707  
*Leech*, intestinal, i. 305  
*Leg*, tumid puerperal, ii. 474  
 ..... of West Indies, ii. 479  
*Leipopsychia*, iii. 504  
*Lenticula*, iv. 683  
*Lentor of the blood*, what, ii. 45  
*Leodonton Taraxacum*, i. 378  
 ..... iv. 450  
*Leontiasis*, ii. 856  
*Lepidosis*, iv. 569  
 ..... *Pityriasis*, iv. 571  
 ..... *Lepriasis*, iv. 574  
 ..... *Psoriasis*, iv. 592  
 ..... *Ichthyiasis*, iv. 597  
*Lepriasis*, iv. 574  
*Leprosy*, iv. 574  
 ..... *Asturian*, ii. 865  
 ..... *black*, ii. 857  
 ..... *dull-white*, iv. 579  
 ..... *dusky*, iv. 580  
*Leprosy, nigrescent*, iv. 580. 583  
 ..... *bright-white*, iv. 580. 584  
*Lethargus*, } iii. 584  
*Lethargy*, }  
 ..... varieties of, iii. 585  
*Leucasmus*, iv. 680  
*Leuce*, iv. 580  
*Leucorrhæa*, iv. 66  
 ..... *communis*, iv. 68  
 ..... *Nabothi*, iv. 73  
 ..... *senescentium*, iv. 74  
*Libellula* or dragon-fly, singular position of sexual organs, iv. 10  
*Lichen* (in botany) *caninus*, iii. 369  
 ..... *terrestris cinereus*, iii. 369  
 ..... in pathology, iv. 550  
*Lientery*, i. 235  
*Life*, various hypotheses concerning, iii. 37  
 ..... weariness of, iii. 149  
*Lign-aloes* in indigestion, i. 166  
*Limosis*, i. 103  
 ..... *avens*, i. 104  
 ..... *Cardialgia*, i. 121  
 ..... *Dyspepsia*, i. 146  
 ..... *Emesis*, i. 137  
 ..... *expers*, i. 110  
 ..... *Flatus*, i. 129  
 ..... *Pica*, i. 117  
*Lippitude*, ii. 429  
*Lippitudo*, ii. 429  
*Lisping*, i. 504  
*Lithia*, iv. 499  
 ..... *renalis*, iv. 502  
 ..... *vesicalis*, iv. 513  
*Lithiasis*, iv. 499  
*Lithic calculus*, iv. 501  
*Lithontriptics*, iv. 524  
 ..... *Stephens's*, iv. 524  
*Lithopædion*, iv. 257  
*Lithotomy*, iv. 526  
*Lithus*, iv. 499  
*Liver*, organ of, i. 8  
 ..... how affected by summer heat, i. 229  
 ..... use of, i. 362  
 ..... found in most animals of every rank, i. 362  
 ..... inflammation of, ii. 387  
*Living principle*, various hypotheses concerning, iii. 37  
*Loathing*, i. 140  
*Lobelia syphilitica*, ii. 838  
*Lochial discharge profuse*, iv. 239. 244  
*Locked jaw*, iii. 317  
 ..... varieties, iii. 320  
*Locke*, tribute to his *Essay on Human Understanding*, iii. 45  
*Lodgement of matter in the chest*, ii. 264  
*Long-sight*, iii. 206  
*Looseness*, i. 225  
*Lopezia Mexicana*, or *lopez-root*, i. 237  
*Love*, ungovernable, iii. 124  
*Love-sickness*, iii. 124  
*Lousiness*, iv. 645

*Loxia*, III. 310  
 Lowness of spirits, III. 144  
     ..... its varieties, III. 146  
*Ludibria fauni*, I. 581  
*Lues*, II. 823  
     .... Syphilis, II. 825  
     .... syphilodes, II. 346  
     .... history of, II. 826  
     .... Ostiacks said to be insusceptive  
         of, II. 836  
*Lullaby-speech*, I. 501  
*Lumbago*, II. 488. 495  
*Lumbrius cucurbitinus*, I. 309  
*Luna fixata*, III. 440  
*Lungs*, structure of, I. 439  
*Lupus*, II. 933  
*Lust*, IV. 118  
*Lyssa*, III. 339  
     ..... canina, III. 350. 353  
     ..... felina, III. 350, 351

M.

*Macular-skin*, IV. 679  
*Madness*, III. 91  
     ..... varieties, III. 91  
     ..... lascivious, IV. 123  
*Madwort*, III. 375  
*Magendie*, his hypothesis concerning  
     the living principle, III. 38  
     ..... of the ab-  
         sorbent system, IV. 277  
     ..... his azotic regimen of, in cal-  
         culus, IV. 522  
*Maggot*, intestinal, I. 306  
*Magnesia*,  
     ..... its use in indigestion, I. 158  
*Malabar nut*, I. 155  
*Malaria* of the Campagna, II. 132  
*Mal de la Rosa*, II. 551, 866  
*Mal de Siam*, II. 145  
     .... del Sole, II. 863  
*Maliasmus*, IV. 644  
*Malis*, IV. 644  
     ..... pediculi, IV. 645  
     ..... pulicis, IV. 648  
     ..... acari, IV. 650  
     ..... filiarie, IV. 652  
     ..... gordii, IV. 654  
     ..... cestri, IV. 653  
*Malleatio*, III. 435  
*Malum pilare*, IV. 663  
*Mama-plan*, II. 675  
*Manducation*, I. 8  
*Mange*, IV.  
*Mania*, III. 91  
     ..... varieties, III. 91  
     ..... the illusion often unconnected  
         with the cause of the disease, III.

*Mania*, most easily cured when pro-  
     duced by accidental causes, III.  
     100  
     ..... heat and cold in the cure ap-  
         plied at the same time, III. 105  
     ..... attendance on religious ser-  
         vices, how far advisable, III. 106  
     ..... moral treatment of, III. 106,  
*Manie sans delire*, III. 133  
*Marasmus*, II. 710  
     ..... Atrophia, II. 714  
     ..... climactericus, II. 721  
     ..... Tabes, II. 731  
     ..... Phthisis, II. 742  
*Marcus*, his doctrine of fever, II. 42  
*Mare's milk* as a vermifuge, I. 325  
*Marsh effluvium*, II. 61  
     ..... principles, II. 66  
     ..... laws of, II. 75  
*Masques à louchette*, III. 236  
*Materialism*, hypotheses in support of,  
     III. 37  
*Matter*, lodgement of in the chest, II.  
     264  
     ..... of the world, its essence not  
         known, III. 34  
     ..... whether extension be a dis-  
         tinct property, III. 35  
     ..... whether solidity, III. 35  
*Maw-worm*, I. 301  
*Meal-bark*, I. 4  
*Measles*, II. 569  
     ..... black, II. 570  
*Medicine gymnastic*, II. 781  
     ..... pneumatic, II. 783  
*Megrim*, III. 483  
*Melana*, I. 387  
     ..... cholea, I. 389  
     ..... cruenta, I. 392  
*Melaleuca Leucodendron*, I. 83  
*Melampodium*, IV. 364  
*Melanæma*, III. 551  
*Melancholia*, III. 78  
     ..... its varieties, III. 78  
*Melancholy*, III. 78  
     ..... how distinguished patho-  
         gnomically from mania, III. 58  
     ..... why mistaken at times for  
         hypochondrism, III. 81  
     ..... exciting causes, III. 83  
     ..... tendency to violence and  
         abusive language accounted for, III.  
         88  
*Melas*, IV. 580  
*Melasma*, IV. 636  
*Melliceris*, IV. 311  
*Memory*, retention of, how differs from  
     quickness, III. 184  
     ..... failure of, III. 184  
*Menorrhagia*, IV. 59

- Menstruation obstructed, iv. 40  
 ..... by retention,  
     iv. 41  
 ..... by suppres-  
     sion, iv. 46  
 ..... laborious, iv. 47  
 ..... superfluous, iv. 58  
 ..... vicarious, iv. 61  
 ..... irregular cessation of,  
     iv. 63  
 Mental extravagance, iii. 136  
 Mephytic suffocation, iii. 564  
 Merganser, i. 433  
 Mergus, i. 433  
 MESOTICA, iv. 289  
 Metamorphopsia, iii. 212  
 Miasm, febrile, what, ii. 62  
 ..... laws of, ii. 75  
 ..... powers of in typhus, ii. 184  
 ..... identity with contagion, ii. 441  
 Mildew mortification, ii. 915  
 Miliary fever, ii. 581  
 Milium, iv. 567  
 Milk, artificial, ii. 776  
 Milks, analysis of in different animals,  
     ii. 775  
 Milk-teeth, i. 30  
 Milk-flow, prematurity, iv. 94  
 ..... deficient, iv. 97  
 ..... depraved, iv. 99  
 ..... erratic, iv. 101  
 ..... in males, iv. 102  
 Millepes, i. 370  
 Millet-rash, iv. 567  
 Mind, its nature but little known, iii.  
     33  
 ..... whether in its essence material  
     or immaterial, iii. 34  
 ..... real character deducible from  
     natural and revealed evidence, but  
     its essence not known, iii. 36  
 ..... by what means it maintains an  
     intercourse with the surrounding  
     world, iii. 43  
 ..... various hypotheses examined, iii.  
     44  
 ..... the difficulty felt by Locke, iii.  
     44  
 ..... its faculties to itself what organs  
     are to the body, iii. 52  
 ..... feelings of, iii. 53  
 ..... subject to diseases as well as the  
     body, iii. 53  
 Misanthropy, iii. 150  
 Miscarriage, iv. 176  
 Misemission, seminal, iv. 131  
 Misenucciatiō, i. 494  
 Mislactation, iv. 93  
 Mismenstruation, iv. 38  
 Mismenstruation, barrenness of, iv. 143  
 Mismicturition, iv. 438  
 ..... See Paruria.  
 Misossification, iv. 317  
 ..... fragile, iv. 318  
 ..... flexile, iv. 321  
 Mole uterine, iv. 259  
 ..... cutaneous, iv. 681  
 Mollities ossium, iv. 321  
 Monorchids, whether natural, iv. 11  
 Morbus niger, i. 387  
 ..... comitialis, iii. 535  
 ..... pilaris, iv. 654  
 ..... puerorum, iv. 112  
 Moria, iii. 180  
 ..... imbecillis, iii. 181  
 ..... demens, iii. 190  
 Mordekie, Mordechie (Arab.), i. 257  
 Morpio, iv.  
 Mort de chien (cholera), i. 257  
 Mortification, ii. 909  
 Moss, Iceland, i. 522  
 Mountain-parsley as a diuretic, iv.  
     499  
 Mouth-watering, i. 74  
 Mulberry calculus of the bladder, iv.  
     501  
 Mumps, ii. 336  
 Mungo radix, iii. 366  
 Musca, larves of, intestinal, i. 306  
 ..... carnaria, i. 306  
 ..... vomitoria, i. 306  
 MUSCLES, DISEASES AFFECTING THE,  
     iii. 300  
 ..... fibres of, iii. 5  
 ..... in mass, iii. 300  
 ..... voluntary and involuntary,  
     iii. 304  
 ..... See muscular fibres  
 Muscular fibres, what and how pro-  
     duced, iii. 5  
 ..... contraction, laws of, iii. 302  
 ..... See Muscles  
 Musk in rabies, iii. 371  
 ..... artificial, how prepared, i. 528  
 Myrrh in hectic fever, ii. 171

## N.

- Nausea, i. 140  
 Necrosis, ii. 917  
 Necrosis ustilaginea, ii. 914  
 Negroes, pye-balled or spotted, iv. 689,  
     690  
 Nephritis, ii. 399  
 Nerium antidysentericum, ii. 471  
 Nerve-ache, iii. 285  
 ..... of the face, iii. 287  
 ..... foot, iii. 287. 295

*Nerve-ache*, of the breast, III. 286. 297  
*Nerves*, number and general character, III. 8  
 ..... whether solid chords or hollow cylinders, III. 22  
*Nervous function*, its extent and importance, III. 3  
 ..... fluid, III. 28  
 ..... both sensific and motory, III. 28  
*Netek* (Hebrew) Scall, IV. 586  
*Nettle-lichen*, IV. 552, 559  
 ..... rash, II. 576  
*Neuralgia*, III. 285  
 ..... faciei, III. 287  
 ..... mistaken for tooth-ache, I. 55  
 ..... pedis, III. 286. 295  
 ..... mammæ, III. 286. 297  
*NEUROTICA*, III. 55  
*Nictitatio*, III. 419  
*Night-mare*, I. 580  
*Night-pollution*, III. 174  
*Night-sight*, III. 199  
*Nirles*, IV.  
*Nisus formativus*, what, IV. 22  
*Noli me tangere*, II. 933  
*Numbness*, III. 280  
*Nutmeg*, hypnotic quality of, I. 134  
 ..... III. 463  
*Nux vomica*, I. 128. 167  
 ..... in intermittents, II. 127  
 ..... dysentery, II. 467  
 ..... palsy, III. 646  
*Nyctalopia*, III. 199. 202  
*Nymphaea Nelumbo*, II. 841  
*Nymphomania furibunda*, IV. 124. 126

## O.

*Obesity*, IV. 292  
 ..... general, IV. 292  
 ..... splanchnic, IV. 296  
*Oblivion*, III. 184  
*Obstipation*, I. 222  
*Ocular spectres*, III. 212  
*Odontia*, I. 24  
 ..... dentitionis, I. 25  
 ..... dolorosa, I. 39  
 ..... stuporis, I. 56  
 ..... deformis, I. 59  
 ..... edentula, I. 61  
 ..... incrustans, I. 65  
 ..... excrescens, I. 67  
*Oestrus*, (larves of, or) bots, intestinal, I. 301  
 ..... cuticular, IV. 653  
*Oil*, train, in chronic rheumatism, II. 501  
*Oleum templinum*, I. 315

*Oleum jecoris aselli*, II. 501  
*Olives*, singular mode of rearing, I. 11  
*Omentum*, organ of, I. 20  
*Oneirodynia*, III. 167  
*Ononis spicata*, as a diuretic, IV. 449  
*Opacity humoral*, III. 217  
*Ophiasis*, IV. 676  
*Ophiorrhiza Mungos*, III. 366  
*Ophthalmia*, II. 408  
 ..... Taraxis, II. 410  
 ..... iridis, II. 415  
 ..... purulenta, II. 417  
 ..... glutinosa, II. 428  
 ..... chronica, II.  
 ..... metastatica, II. 422  
 ..... epidemica, II. 418  
 ..... gonorrhoeica, II. 423  
 ..... catarrhalis, II. 423  
 ..... intermittens, II. 424  
 ..... Lippitudo, II. 429  
*Ophthalmy*, II. 408  
 ..... lachrymose, II. 410  
 ..... purulent, II. 417  
 ..... of infants, II. 424  
 ..... Egyptian, II. 418  
 ..... epidemic, II. 418  
 ..... glutinous, II. 428  
*Opisthonia*, III. 314  
*Opisthotonus*, III. 314, 329  
*Orange-skin*, IV. 687  
*Orban*, his practice of using acids in consumption, II. 771  
*Orchitis*, II.  
*Organic molecules*, what, IV. 20  
*ORGASM*, DISEASES AFFECTING THE, IV. 104  
*ORGASTICA*, IV. 104  
*Ormskirk medicine*, III. 374  
*Ornithorhynchus paradoxus*, or platypus, I. 7  
*Orthopnœa*, I. 537  
*Osmundia regalis*, I. 323  
*Osteopœdion*, IV. 257  
*Osthexia*, Osthexy, IV. 342  
 ..... infarciens, IV. 344  
 ..... implexa, IV. 345  
 ..... varieties, IV. 346  
*Otaheite*, vowel-softness of many passages in this and other savage tongues, I. 502  
*Ova*, human, IV. 17  
*Ovaria*, human, IV. 17

## P.

*Painter's colic*, I. 186  
*Palpitiatio*, III. 405  
 ..... cordis, III. 406  
 ..... arteriosa, III. 410  
 ..... complicata, III. 415



- Palpitation*, III. 405  
 ..... in the epigastric region, III. 412  
*Palsy*, III. 620  
 ..... varieties, III. 625  
 ..... shaking, III. 443  
*Pandiculatio*, *Pandiculation*, III. 423  
*Papula*, IV. 545  
*PAPULOUS SKIN*, IV. 545  
*Parabysma*, I. 404  
 ..... hepaticum, I. 405  
 ..... complicatum, I. 425  
 ..... intestinale, I. 421  
 ..... mesentericum, I. 417  
 ..... omentale, I. 424  
 ..... pancreaticum, I. 416  
 ..... splenicum, I. 412  
*Paracentesis* in dropsy of the chest, of early origin, IV. 402  
*Paracusis*, III. 239  
 ..... acris, III. 241  
 ..... obtusa, III. 243  
 ..... perversa, III. 245  
 ..... duplicata, III. 247  
 ..... illusoria, III. 248  
 ..... varieties, III. 249  
 ..... *Surditas*, III. 250  
*Paracyesis*, IV. 164  
 ..... irritativa, IV. 164  
 ..... uterina, IV. 173  
 ..... Abortus, IV. 176  
*Parageusis*, III. 263  
 ..... acuta, III. 267  
 ..... obtusa, III. 267. 269  
 ..... expers, III. 267. 270  
*Paralysis*, III. 620  
 ..... varieties of, III. 625  
 ..... whether likely to be benefited by tertian ague, III. 651  
*Paramenia*, IV. 38  
 ..... obstructionis, IV. 40  
 ..... difficilis, IV. 47  
 ..... superflua, IV. 58  
 ..... erroris, IV. 61  
 ..... cessationis, IV. 63  
*Paraphimosis*, II. 281  
*Paraplegia*, III. 626. 631  
*Parapsis*, III. 272  
 ..... acris, III. 273  
 ..... expers, III. 280  
 ..... illusoria, III. 282  
*Parenchyma* of organs, IV. 265  
*PARENCHYMA*, DISEASES AFFECTING THE, IV. 289  
*Paristhmitis*, II. 338  
 ..... varieties, II. 339  
*Parodynia*, IV. 190  
 ..... atonica, IV. 192  
 ..... implastica, IV. 195  
 ..... sympathetica, IV. 203  
*Parodynia*, perversa, IV. 213  
 ..... amorphica, IV. 220  
 ..... pluralis, IV. 233  
 ..... secundaria, IV. 238  
*Paroniria*, III. 167  
 ..... ambulans, III. 168. 169  
 ..... loquens, III. 168. 173  
 ..... salax, III. 168. 174  
*Paronychia*, II. 296  
*Paropsis*, III. 198  
 ..... lucifuga, III. 199  
 ..... noctifuga, III. 202  
 ..... longinqua, III. 206  
 ..... propinqua, III. 208  
 ..... lateralis, III. 209  
 ..... illusoria, III. 210  
 ..... Caligo, III. 214  
 ..... Glaucomis, III. 217  
 ..... Catarracta, III. 218  
 ..... Synizesis, III. 224  
 ..... Amaurosis, III. 226  
 ..... Staphyloma, III. 232  
 ..... Strabismus, III. 236  
*Parosmis*, III. 254  
 ..... acris, III. 254  
 ..... obtusa, III. 260  
 ..... expers, III. 261  
*Parostia*, IV. 317  
 ..... fragilis, IV. 318  
 ..... flexilis, IV. 321  
*Parotid phlegmon*, II. 275  
*Parotitis*, II. 336  
*Paruria*, IV. 438  
 ..... inops, IV. 439  
 ..... retentionis, IV. 443  
 ..... stillatitia, IV. 452  
 ..... mellita, IV. 458  
 ..... incontinens, IV. 492  
 ..... incocta, IV. 496  
 ..... erratica, IV. 497  
*Passio bovina*, IV.  
*Passion ungovernable*, III. 110  
*Passions* of the mind, as liable to disease, as its intellectual faculties, III. 110  
*Pearl-ash*, in indigestion, I. 160  
*Pelagra*, } II. 862  
*Pellagra*, }  
*Pemphigus*, II. 603  
*Peripneumonia*, II. 356  
*Peripneumony*, II. 356  
 ..... varieties, II. 356  
*Peritoneal fever*, II. 219  
*Peritoneum*, inflammation of, II. 371  
*Peritonitis*, II. 371  
 ..... propria, II. 372  
 ..... omentalis, II. 374  
 ..... mesenterica, II. 375  
*Pernio*, II. 313  
*Pestis*, II. 641

- Pestis, varieties*, II. 641  
*Phacia*, IV. 683  
*Phalæna pinguinalis*, larves of, intestinal, I. 307  
*Phasianus*, mot-mot, I. 433  
*Pheasant*, mot-mot, I. 433  
*Philantia*, III. 117  
*Phimosis*, II. 281  
*Phimotic phlegmon*, II. 281  
*Phlegmasiæ*, II. 226  
*Phlegmatia dolens*, II. 475  
*Phlegmone*, *Phlegmon*, II. 271  
..... *Parulis*, II. 273  
..... *communis*, II. 272  
..... *auris*, II. 274  
..... *parotideæ*, II. 275  
..... *mammæ*, II. 278  
..... *Bubo*, II. 280  
..... *phimotica*, II. 281  
*Phlogistica*, II. 226  
*PHLOGOTICA*, II. 226  
*Phlyctænæ*, II. 312  
*Phlysis*, II. 296  
*PHONICA*, I. 455  
*Phosphorus* in typhus, II. 212  
..... *gout*, II. 525  
*PHRENICA*, III. 55  
*Phrensy*, II. 327  
*Phryganea grandis*, larves of, intestinal, I. 307  
*Phthiriasis*, IV. 644  
*Phthisis*, II. 742  
..... *varieties*, II. 743  
..... *dyspeptic*, II. 744  
*Phyma*, II. 283  
..... *Hordeolum*, II. 284  
..... *Furunculus*, II. 285  
..... *Sycosis*, II. 286  
..... *Anthrax*, II. 287  
*Physalis Alkekengi*, or winter-cherry, IV. 453  
*Physometra*, IV. 434  
*Pian*, II. 670  
*Piles*, I. 345  
*Pin of the eye*, III. 215. 228  
*Pin-eye*, III. 215. 228  
*Placenta*, retention of, IV. 239  
*Plague*, II. 641  
..... *varieties*, II. 641  
..... of Athens, II. 643, 645  
..... of London, II. 645  
..... of Morocco, II. 647  
..... of British army in Egypt, II. 651  
..... *inoculation* for, II. 650  
..... *exposure* to, diminishes its power, II. 662  
..... *influenced* by state of the atmosphere, II. 663  
*Platalea Leucorodia* (spoon-bill), I. 433  
*Plethora*, II. 679  
..... *entonica* or sanguine, II. 682  
..... *atonica* or serous, II. 683  
*Pleuralgia*, I. 594  
..... *acuta*, I. 595  
..... *chronica*, IV. 597  
*Pleurisy*, II. 364  
..... *spurious*, II. 495  
*Pleuritis*, II. 364  
..... *vera*, II. 365  
..... *mediastina*, II. 367  
..... *diaphragmatica*, II. 368  
*Pleurosthotonus*, III. 329  
*Plica*, IV. 666  
*Pneumatic medicine*, II. 783  
*PNEUMATICA*, I. 455  
*Pneumatosis*, IV. 426  
*Pneumonica*, I. 505  
*Pneumonitis*, II. 256  
..... *vera*, II. 357  
..... *maligna*, II. 362  
..... *notha*, II. 363  
*Podagra*, II. 502  
..... *its varieties*, II. 505  
*Pœcilia*, IV. 689  
*Poison of viper* as an antilyssic, III. 386  
*Poliosis*, IV. 672  
*Polyglottus*, mocking-bird, I. 435  
*Polypus*, I. 462  
..... *elasticus*, I. 463  
..... *coriaceus*, I. 464  
..... *uteri*, IV. 154  
..... *vaginæ*, IV. 154  
*Polysarcia*, IV. 291  
..... *adiposa*, IV. 292  
*Pompholyx*, *Pomphus*, IV. 604  
*Pontine marshes*, insalubrity of, II. 132  
*Porphyra*, II. 870  
..... *simplex*, II. 872  
..... *hæmorrhagica*, II. 875  
..... *nautica*, II. 881  
*Porrigo*, IV. 624, 625  
*Portland powder*, II. 528  
*Pose*, II. 335  
*Power, nervous*, III. 28  
..... *sensific and motific*, III. 28  
..... *motific, or irritation of a lower description than sensific*, III. 30  
*Pox*, II. 825  
..... *bastard*, II. 846  
*Precocity*, genital, IV. 113  
*Pregnancy, morbid*, IV. 164  
..... *from constitutional derangement*, IV. 165  
..... *from local derangement*, IV. 173

- Pregnancy, morbid, from miscarriage,*  
 IV. 176  
 ..... proper period of,  
 IV. 160  
 ..... utmost extent al-  
 lowed, IV. 162  
*Premature delivery, its advantages at*  
*times, IV. 231*  
*Priapus, III. 309*  
*Pricking, general feeling of, III. 277*  
*Prickly-heat, IV. 552, 556*  
*Pride ungovernable, III. 119*  
*Proctica, I. 326*  
 ..... simplex, I. 326  
 ..... spasmodica, I. 327  
 ..... callosa, I. 337  
 ..... Exania, I. 355  
 ..... Marisca, I. 345  
 ..... Tenesmus, I. 343  
*Præotia, IV. 113*  
 ..... fœminina, IV. 115  
 ..... masculina, IV. 113  
*Prolapse, genital, IV. 147*  
 ..... of the bladder, IV. 152  
 ..... vagina, IV. 151  
 ..... womb, IV. 148  
*Protuberant eye, III. 232*  
*Prunus Lauro-cerasus, I. 378, 591*  
 ..... in fevers, II. 128  
*Prurigo, IV. 562*  
*Pruritus, III. 276*  
*Prussic acid, I. 411*  
*Psellismus, I. 491*  
 ..... Bambalia, I. 491  
 ..... Blæsitæ, I. 494  
*Pseudocyesis, IV. 258*  
 ..... molaris, IV. 259  
 ..... inanis, IV. 262  
*Psoas abscess, II. 259*  
*Psora, IV. 577, 592*  
*Psoriasis, IV. 592*  
*Psorophthalmia, II. 428*  
*Ptyalism, I. 71*  
*Ptyalismus, I. 71*  
 ..... acutus, I. 72  
 ..... chronicus, I. 82  
 ..... iners, I. 83  
*Pubis symphysis ossa, division of, in*  
*impracticable labour, IV. 224*  
*Puerperal fever, II. 218*  
 ..... epidemic, II. 221  
 ..... contagious, II. 221  
 ..... mania, III. 92  
 ..... convulsions, III. 519  
*Pulex (Daphnia), IV. 6*  
 ..... (Monoculus), IV. 6  
*Pulex, IV.*  
*Pulsatilla nigricans, III. 215*  
*Pulse, doctrine of, II. 20*  
*Pulse, why different in different ages,*  
 II. 9  
 ..... standard in adult life, II. 20  
 ..... infancy, II. 21  
 ..... advanced life, II. 22  
 ..... different kinds of, II. 25  
 ..... of Solano, II. 26  
 ..... of Borden, II. 26  
*Pulselessness, III. 387*  
*Pulvis antilyssus, III. 370*  
 ..... Cobbii, III. 373  
*Pupil, closed, III. 224*  
 ..... double, III. 225  
 ..... five-fold, III. 225  
*Purpura (Miliaria), II. 580*  
*Purulent ophthalmia, II. 417*  
*Pus, a secretion, II. 248, 250*  
 .... Hewson's view, II. 248  
 .... Hunter's, II. 252, 255  
 .... use of, II. 253, 256  
*Push, II. 272*  
*Pye-balled skin, IV. 689*  
*PYRECTICA, II. 37*
- Q.
- Quartan ague, II. 103*  
 ..... double, }  
 ..... treble, } II. 106  
 ..... duplicate, }  
 ..... triplicate, }  
*Quas, Russian, II. 889*  
*Quinsy, II. 338*  
 ..... varieties, II. 339  
 ..... nervous, I. 91
- R.
- Rabid blood, as an antilyssic, III. 375*  
*Rabies, III. 339*  
 ..... canine, III. 350, 353  
 ..... feline, III. 350, 351  
*Rainbow worm, IV. 612*  
*Raphania, III. 447*  
*Raptus nervorum, III. 314.*  
*Rash exanthem, II. 549*  
 .... rose, IV. 542  
 .... gum, IV. 547.  
 .... lichenous, IV. 550  
 .... pallid, IV. 550  
 .... pruriginous, IV. 562  
 .... millet, IV. 567  
 .... rainbow, IV.  
 .... tooth, IV. 547, 548  
 .... wild-fire, IV. 548, 549  
*Rattling in the throat, I. 466*  
*Rectum, stricture of, spasmodic, I. 327*  
 ..... callous, I. 337  
*Red-gum, IV. 547*  
*Remittent fever, II. 133*

*Remittent fever, mild*, II. 134  
 ..... malignant, II. 136  
 ..... autumnal, II. 137.  
 ..... yellow, II. 144  
 ..... burning, II. 159  
 ..... asthenic, II. 161  
 ..... of Breslaw, II. 162  
*Renal calculus*, IV. 502  
*Respiration, effect of, on the blood*, I. 443  
 ..... Ellis's hypothesis, I. 445  
 ..... quantity of air expired and inspired in, I. 449  
*Rest-harrow as a diuretic*, IV. 449  
*Restlessness*, III. 465  
*Retching*, I. 140  
*Retension of the menses*, IV. 41  
 ..... secundines, IV. 239  
*Revery*, III. 156  
 ..... of mind, III. 157  
 ..... abstraction of mind, III. 157. 161  
 ..... brown-study, III. 157. 163  
*Rhachialgia*, I. 186  
*Rhachitis*, IV. 327  
 ..... origin of the name, IV. 327  
*Rheuma, how used formerly*, II. 502  
*Rheumatism, acute*, II. 488  
 ..... whether co-exists with gout, II. 486  
 ..... articular, II. 488  
 ..... lumbar, II. 495.  
 ..... of the hip-joint, II. 495  
 ..... pleura, II. 495  
 ..... chronic, II. 498  
*Rhonchus*, I. 466  
 ..... Stertor, I. 467  
 ..... Cerchnus, I. 468  
*Rhus vernix*, I. 530. III. 646  
 ..... toxicodendrum, III. 648  
*Rhypia*, IV. 614  
*Richerand, his hypothesis concerning a living principle*, III. 38  
*Rickets*, IV. 327  
*Ringing in the ears*, III. 249  
*Ring-worm*, IV. 607. 611  
 ..... scall, 625. 629  
*Rosalia*, II. 550.  
*Rose-rash*, IV. 542  
*Rose-wood*, I. 136  
*Roseola*, IV. 542  
*Rosy-drop*, II. 294  
*Rot in sheep, cause of*, I. 312  
*Rotacismus*, I. 500  
*Rubeola*, II. 569  
*Rubia tinctorum*, IV. 52  
*Rubula*, II. 670  
*Rubus Chamæmorus*, II. 888  
*Rumbling of the bowels*, I. 130  
*Rumination, instances of in man*, I. 137  
*Running at the nose*, I. 456.  
*Rye, spurred*, IV. 54.

## S.

*Saat* (Hebr.), IV. 586  
*Sahafata* (Arab.), Scall, IV. 593  
*Salacitas*, }  
*Salacity*, } IV. 118  
*Saliva, analysis of*, I. 71  
*Salivation*, I. 72  
*Salmon, fecundity of*, IV. 8  
*Sambucus Ebulus*, IV. 363  
 ..... nigra, IV. 363  
*Sancti Viti chorea*, III. 431  
*Sand, urinary*, IV. 503  
 ..... white, IV. 503  
 ..... red, IV. 504  
*Sanguiferous system, machinery of*, II. 3  
 ..... moving powers of, II. 12  
 ..... fluids of, III. 28  
*Santonica*, I. 319  
*Saphat* (Hebr.) Scall, IV. 578. 586. 593  
*Sarcocele*, IV. 305  
*Satyriasis furens*, IV. 124  
*Scabies*, IV. 637, 638  
*Scabiosa Indica*, I. 313  
*SCALE-SKIN*, IV. 569  
*Scall, dry*, IV. 592  
 ..... humid, IV. 618  
 ..... scabby, IV. 624  
 ..... milky, IV. 626  
 ..... honey-comb, IV. 628  
*Scalled head*, IV. 627  
*Scandix cerefolium*, I. 351  
*Scarabæus, (beetle-grubs) intestinal*, I. 301  
*Scarlatina*, II. 550  
*Scarlet-fever*, II. 550  
 ..... with sore throat, II. 553, 557  
*Scelotyrbe*, III. 432. 443  
*Scented odours issuing from the bodies of animals*, IV. 539  
*Sciatica*, II. 495  
*Scotodinus*, III. 500  
*Scotoma*, III. 500. 503  
*Scott's acid bath, in jaundice*, I. 380  
 ..... lues, II. 840  
*Scrophula*, II. 790  
*Scurvy*, II. 870  
 ..... land, II. 875  
 ..... petecchial, II. 872  
 ..... sea, II. 881  
*Scybalum*, I. 283  
*Sea-bear*, I. 4  
 .... calf, I. 4  
 .... sickness, how produced, I. 145  
 .... worms, feed harmlessly on copper-bottomed ships, I. 204



- Seasoning fever of hot climates, II. 147  
 Secale cornutum, or spurred rye, I. 208  
 SECEHNENT SYSTEM, DISEASES OF, IV. 266  
 Secretions, furnished by different animals, and often the same animal in different parts, IV. 286.  
     ..... sugar }  
     ..... sulphur } id.  
     ..... lime }  
     ..... milk }  
     ..... urine }  
     ..... bile }  
     ..... honey }  
     ..... wax, IV. 287  
     ..... silk }  
     ..... phosphorescent light }  
     ..... air } id.  
     ..... electricity }  
     ..... furnished by plants }  
     ..... equally diversified, }  
 Secundines, retention of, IV. 239  
 Self-conceit, ungovernable, III. 117  
 Seminal fluid, how secreted, IV. 11  
     ..... powerful influence of, on the animal economy, IV. 13  
     ..... flux, IV. 89  
     ..... entonic, IV. 90  
     ..... atonic, IV. 91  
     ..... misemission, IV. 131  
 Senega, IV. 365  
 Seneka-root, I. 569  
 SENSATION, DISEASES AFFECTING THE, III. 195  
 Sensation and motion, principle of, III. 22  
     ..... whether a common power, or from distinct sources, III. 24  
 Senses, external, in different animals, III. 14  
     ..... whether any animal possesses more than five, III. 20  
 SENSORIAL POWERS, DISEASES AFFECTING JOINTLY, III. 456  
 Sentimentalism, III. 136  
 Serpigo, IV.  
 Seta equina, intestinal, I. 304  
 Seville Orange Tree, III. 439  
 Sex and features, how accounted for, IV. 16. 21  
 Sexual fluids, diseases affecting, IV. 37  
 Shaking palsy, III. 443  
 Shark, procreation of, IV. 7  
 Shingles, IV. 607. 609  
 Short-breath, I. 538  
 Sibbens, or Sivens, II. 849  
 Sick head-ache, III. 486  
 Sickness of the stomach, I. 137  
 Sighing, how produced, I. 443  
 Sight, in different animals, II.  
 Sight, morbid, III. 198  
     ..... night, III. 199  
     ..... day, III. 202  
     ..... long, III. 206  
     ..... of age, III. 207  
     ..... short, III. 208  
     ..... skew, III. 209  
     ..... false, III. 210  
 Silliness, III. 190  
 Silver, nitrate of, in epilepsy, III. 547  
     ..... power of producing a dark colour on the skin, III. 547  
 Simarouba, II. 470  
 Singing-birds, vocal avenue of, I. 434  
     ..... bull-finch, I. 434  
     ..... nightingale, I. 434  
     ..... thrush, I. 434  
     ..... tuneful manakin, I. 434  
     ..... mocking-bird, I. 435  
 Singultus, III. 399  
 Sisymbrium, III. 526  
 Skin, papulous, IV. 545  
 Slaughter-houses, exhalation of, in consumption, II. 784  
 Slavering, I. 83  
 Sleeplessness, III. 458  
 Sleep-disturbance, III. 167  
     ..... sleep-walking, III. 169  
     ..... sleep-talking, III. 169. 173  
     ..... night-pollution, III. 169  
 Small-pox, II. 618  
     ..... varieties, II. 626  
 Smell, morbid, III. 254  
     ..... acrid, III. 254  
     ..... sex, age, and other qualities discoverable by it, III. 257  
     ..... obtuse, III. 260  
     ..... want of, III. 261  
     ..... illusory, whence, III. 499  
     ..... how far it exists in different animals, III. 16  
 Snaffles, II. 442  
 Snail, procreation of, IV. 10  
 Sneezing, III. 402  
 Snivelling, I. 458  
 Snuff-taking, why injurious, I. 155  
 Snuffles, II. 442  
 Snuffing, I. 458  
 Soap, I. 379  
 Soins, II. 889  
 Sol-lunar influence, Balfour's hypothesis of, II. 82  
 Solid parts of organs, of what composed, IV. 266

- Solvents, biliary, I. 402  
 Somnambulism, III. 169  
 Sore-throat, II. 338  
     ..... ulcerated or malignant, II. 342  
 Soreness, general feeling of, III. 273  
 Sounds, vocal, I. 500  
     ..... guttural, I. 504  
     ..... nasal, I. 500  
     ..... lingual, I. 500  
     ..... dental, I. 504  
     ..... labial, I. 500. 503  
     ..... imaginary in the ears, III. 249  
 Sparganosis, II. 474  
 Spasm, doctrine of, as applicable to fevers, II. 46  
*Spasm, constrictive*, III. 308  
     ..... its species, III. 308  
     ..... *clonic*, III. 394  
     ..... its species, III. 398  
     ..... *syncronic*, III. 427  
     ..... its species, III. 427  
     ..... *comatose*, III. 513  
     ..... its species, III. 513  
 Spawn, or hard roe, what, IV. 8  
 Speech, how produced, I. 431  
     ..... inability of, I. 470  
     ..... may be produced without a tongue, I. 471  
 Speechlessness, I. 470  
 Sperm, or soft roe, what, IV. 8  
*Spermorrhœa*, IV. 89  
 Spider discharged from the anus, I. 308  
*Spigelia*, I. 313. 324  
*Spiguel*, IV. 53  
*Spilosis*, IV. 681  
*Spilus*, IV. 681  
*Spina ventosa*, what, II. 923  
 Spine, dropsy of, I. 394  
 Spirit of animation, of Darwin, II. 56  
 Spitting of blood, II. 695  
*SPLANCHNICA*, I. 359  
 Spleen, office not known, I. 20  
     ..... not found below the class of fishes, I. 20  
     ..... III. 150  
 Splenalgia, II. 398  
 Splenitis, II. 397  
 Spoon-bill, I. 433  
 Spurred-rye, I. 208  
     ..... IV. 54  
 Spurzheim, his hypothesis upon the nature of the mind, III. 39  
*Squalus*, procreation of, IV. 7  
*Squinting*, III. 236  
     ..... varieties, III. 237  
 St. Anthony's fire, II. 609  
     ..... varieties, II. 611  
 St. Guy, Dance de, III. 431  
 St. Vitus's Dance, III. 431  
 Stahl, his doctrine of fevers, II. 42  
 Stammering, I. 491  
*Staphyloma*, III. 232  
     ..... varieties, III. 232  
 Stays, tight, their mischievous effects, I. 598  
*Sterility, male*, IV. 127  
     ..... *female*, IV. 140  
*Sternalgia*, I. 582  
     ..... *ambulantium*, I. 583  
     ..... *chronica*, I. 592  
*Sternutatio*, III. 402  
 Stertor, I. 467  
 Stiff-joint, muscular, III. 312  
     ..... its varieties, III. 312  
 Stitch, I. 595  
 Stomach, organ of, I. 6  
     ..... omnivorous power of, I. 4  
     ..... self-digesting power of, I. 16  
     ..... seat of universal sympathy, I. 21  
     ..... inflammation of, II. 376  
 Stone in the bladder, IV. 513  
 Stone-pock, II. 291  
 Stoppage of urine, IV. 443  
*Strabismus*, III. 236  
*Stramonium*, III. 371  
*Strangury*, IV. 452  
     ..... *spasmodic*, IV. 452  
     ..... *scalding*, IV. 453  
     ..... *callous*, IV. 455  
     ..... *vermiculous*, IV. 456  
     ..... *polypous*, IV. 457  
     ..... *mucons*, IV. 455  
 Stricture of the rectum, *spasmodic*, I. 327  
*Strophulus*, IV. 547  
*Struma*, II. 790  
     ..... *vulgaris*, II. 792  
*Studium inane*, III. 164  
 Stupidity, III. 181  
 Sturgeon, mode of procreation, IV. 9  
 Stuttering, I. 493  
 Sty, II. 284  
*Subsultus*, III. 421  
*Sudor anglicus*, II. 90  
*Suffocatio stridula*, II. 347  
 Suffocation from asphyxy, III. 552  
     ..... from hanging or drowning, III. 552  
     ..... *mephytic*, III. 565  
     ..... *electrical*, III. 569  
     ..... from severe cold, III. 570  
*Suffusio*, III. 219  
     ..... *scintillans*, III. 211  
     ..... *reticularis*, III. 211  
 Sugar in saccharine urine, the proportion, IV. 463

- Summer-rash, IV. 552. 556  
 Sun-burn, IV. 685  
 Superannuation, III. 190. 192  
 Superfetation, IV. 236  
 Suppression of the menses, IV. 46  
 Suppurative inflammation, II. 245  
 Surditas, III. 250  
 SURFACES, INTERNAL, DISEASES AFFECTING, IV. 350  
 SURFACE, EXTERNAL, DISEASES AFFECTING THE, IV. 528  
 Surfeit, I. 198  
 Suspended animation, III. 551  
 Susurrus, III. 249  
*Sweat, morbid*, IV. 531  
     ..... profuse, IV. 533  
     ..... bloody, IV. 534  
     ..... partial, IV. 536  
     ..... coloured, IV. 537  
     ..... scented, IV. 538  
     ..... sandy, IV. 540  
 Swan, dumb, I. 433  
     ..... musical, I. 433  
 Sweating-fever, II. 90  
     ..... whether Englishmen only subject to it, II. 92  
 Sweet-spittle, I. 74. 79  
 Swimming of the head, III. 502  
 Swine-pox, II. 600  
 Swooning, III. 505  
     ..... varieties, III. 508  
 Sycosis, II. 286  
 Sympathies and antipathies, how formed in the mind, III. 51  
*Synclonus*, III. 427  
     ..... Tremor, III. 428  
     ..... Chorea, III. 431  
     ..... Ballismus, III. 443  
     ..... Raphania, III. 447  
     ..... Beriberia, III. 451  
*Syncope*, III. 504  
     ..... simplex, III. 505  
     ..... varieties, III. 508  
     ..... recurrens, III. 510  
 Synizesis, III. 224  
 Synocha, II. 173  
 Synochal fever, II. 215  
 Synochus, II. 215  
     ..... its varieties, II. 216  
 Syrigmus, III. 249  
*Syspasia*, III. 513  
     ..... Convulsio, III. 517  
     ..... Hysteria, III. 528  
     ..... Epilepsia, III. 534  
 SYSTATICA, III. 456  
 Systemma, III. 314

## T.

Tabes, II. 731

- Tabes, varieties, II. 732  
     ..... dorsalis, II. 736  
 Tabor or Talbor, his early use of the bark in agues, II. 123  
*Tadium vitæ*, III. 149  
*Tænia Solium*, I. 298  
     ..... vulgaris, I. 299  
     ..... generation of, IV. 10  
 Tarantismus, III. 432  
 Tar, fumigation with, II. 783  
 Tar-water, useful in indigestion, I. 159  
*Taraxacum*, I. 378  
     ..... IV. 450  
 Taraxis, II. 410  
 Taste, how far it exists in different animals, III. 16. 264  
*Taste, morbid*, III. 263  
     ..... acute, III. 267  
     ..... obtuse, III. 267. 269  
     ..... want of, III. 267. 270  
     ..... illusory, whence, III. 499  
 Teats in the mare, inguinal, IV. 10  
 Teeth, tartar of, I. 65  
     ..... transplantation of, I. 62  
     ..... whether an extraneous body, I. 46  
     ..... whether injured by sugar, I. 49  
     ..... pretended, reproduced by jugglers, I. 38  
     ..... carious, I. 43  
     ..... deformity of, I. 59  
 Teething, I. 25  
     ..... in adults, I. 35  
     ..... in old age, I. 36  
 Tenderness, general external feeling of, how produced, III. 273  
 Teneritudo, III. 273  
 Tenesmus, I. 343  
 Tertian ague, II. 102  
     ..... double, }  
     ..... triple, } II. 102  
     ..... duplicate, }  
 Testes, diminish in the winter in many animals, IV. 10  
     ..... where seated in the cock, IV. 11  
 Testudo, IV. 311  
 Tetanus, III. 328  
     ..... anticus, III. 328. 329  
     ..... dorsalis, III. 328. 331  
     ..... lateralis, III. 328  
     ..... erectus, III. 328. 332  
 Tetter, IV. 606  
 Therioma, IV. 608  
*Thirst, morbid*, I. 97  
     ..... immoderate, I. 100  
     ..... sensation of, how accounted for, I. 98

Thirstlessness, I. 102  
 Throbbing of the arteries, III. 411  
 ..... heart, III. 406  
 Thrush, II. 585  
 ..... its varieties, II. 586  
 Tic, meaning of the term, III. 288.  
 317  
 .... *douloureux*, III. 288  
 Tick-bite, IV. 650  
 Tiglium seeds as a hydragogue, IV. 363  
 Tinea, IV. 626. 628  
 Toads, suckling in cancer, II. 820  
 Tongue, speech not necessarily dependent upon it, I. 473  
 Tonquin powder, III. 373  
 Tooth, derangement of, I. 24  
 ..... wise, I. 35  
 Tooth-ache, I. 39  
 Tooth-edge, I. 56  
 Toothlessness, I. 61  
*Torpor*, III. 549  
*Touch, morbid*, III. 272  
 ..... acute sense of, III. 273  
 ..... insensibility of, III. 280  
 ..... illusory, III. 282  
 Trance, III. 576  
 Transudation in dead animal matter, IV. 276  
 Trembling, III. 428  
 Tremor, III. 428  
*Trichechus Dudong*, I. 4  
 Trichoma, IV.  
 Trichocephalus, I. 299  
*Trichosis*, IV. 663  
 ..... *setosa*, IV. 666  
 ..... *Plica*, IV. 666  
 ..... *Hirsuties*, IV. 670  
 ..... *distrix*, IV. 671  
 ..... *Poliosis*, IV. 672  
 ..... *athrix*, IV. 673  
 ..... *Area*, IV. 675  
 ..... *decolor*, IV. 677  
 Tripudatio, III. 443  
 Trismus (entasia) III. 317  
 ..... varieties, III. 320  
 ..... *maxillaris*, III. 287  
 ..... *dolorificus*, III. 287  
 Triton palustris, intestinal, I. 308  
 Tsoat of the Jews, what, IV. 575, 576, 577. 592  
 Tubba, II. 673  
 Tubercle, II. 283  
 Tumid-leg, puerperal, II. 474  
 ..... of West Indies, II. 479  
 Tumour, IV. 300  
 ..... *sarcomatous*, IV. 301  
 ..... *fleshy*, IV. 301  
 ..... *adipose*, IV. 301  
 ..... *pancreatic*, IV. 302  
 ..... *cellulose*, IV. 302  
 VOL. IV.

Tumour, cystose, IV. 302  
 ..... *scirrhus*, IV. 302. 304  
 ..... *mammary*, IV. 302  
 ..... *tuberculous*, IV. 302  
 ..... *medullary*, IV. 303  
 ..... *encysted*, IV. 310  
 ..... *steatomatous*, IV. 310  
 ..... *atheromatous*, IV. 311  
 ..... *honied*, IV. 311  
 ..... *ganglionic*, IV. 311  
 ..... *horny*, IV. 311  
 ..... *bony*, IV. 314  
 ..... *osteous*, IV. 314  
 ..... *periosteous*, IV. 314  
 ..... *pendulous*, IV. 314  
 ..... *exotic*, IV. 314  
*Turgescence visceral*, I. 404  
 Tussis, I. 506  
 Twinkling of the eye-lids, III. 419  
 Twinning, congruous, IV. 234  
 ..... incongruous, IV. 234  
 Twins, IV. 234  
 Twitchings of the tendons, III. 241  
 Tympanites, IV. 430  
 Tympany, IV. 430  
 ..... whether ever an idiopathic affection, IV. 431  
 Typhomania, II. 327.—III. 537  
 Typhus, how far approximates yellow fever, II. 71. 182  
 ..... described, II. 182  
 ..... causes, II. 182, 183  
 ..... how becomes contagious, II. 184  
 ..... extent and intensity of contagion, II. 184, 185  
 ..... mild, II. 188  
 ..... malignant or putrid, II. 190  
 ..... specific properties of its miasm, II. 184. 195  
 ..... septic power, distinct from its debilitating, II. 195  
 ..... copious bleeding, how far advisable, II. 198

## U &amp; V.

Vaccinia, II. 591  
 ..... its varieties, II. 592  
 Vagina, prolapse of, IV. 147  
 Vapours, III. 146  
 Variola, II. 618  
 Varix, II. 900  
 Varus, II. 291  
 Vegetation promoted by animal dejections, I. 11  
 Veins and arteries, II. 7  
 Vena Medinenses, IV. 652  
 Venereal disease, II. 823  
 S A



Ventriloquism, what, I. 435  
 Vermifuges, I. 312  
 Vermis Medicinis, IV. 652  
 Vermination, cutaneous, IV. 644  
 Vertigo, III. 496  
 ..... origin of, III. 497  
 Verruca, IV. 659  
 Vesiculæ seminales, IV. 11, 12  
 ..... differ in different animals, IV. 12  
 Vesicular inflammation, II. 309  
 ..... fever, II. 603  
 ..... its varieties, II. 604  
 Viper, poison of, as an antilyssic, III. 386  
 Vis insita, III. 25  
 ... nervea, III. 25  
 ... à tergo, hypothesis of, II. 15  
 Viscus quernus, III. 526  
 Vitiligo, IV. 574  
 Ulcer, II. 925  
 ..... depraved, II. 927  
 ..... callous, II. 927  
 ..... fungous, II. 927  
 ..... cancerous, II. 927  
 ..... sinuous, II. 931  
 ..... carious, II. 934  
 Ulcus, II. 925  
 ..... incarnans, II. 926  
 ..... vitiosum, II. 927  
 ..... sinuosum, II. 931  
 ..... tuberculosum, II. 933  
 ..... cariosum, II. 934  
 Vocal avenue, I. 429  
 Voice, how produced, I. 430  
 ..... imitative, seat of, I. 435  
 ..... whispering, I. 483  
 ..... of puberty, I. 487  
 ..... rough, I. 489  
 ..... harsh, I. 489  
 ..... nasal, I. 489  
 ..... squeaking, I. 489  
 ..... whizzing, I. 489  
 ..... guttural, I. 489  
 ..... palatine, or through the nose, I. 489  
 ..... immelodious, I. 489  
 Vomica, II. 269  
 ..... occult, II. 269  
 ..... open, II. 269  
 Vomiting and purging, I. 247  
 ..... of blood, II. 697  
 ..... I. 140  
 Vomito prieto, II. 145, 146  
 Vomituritio, I. 140  
 Vomitus, I. 140  
 Voracity, I. 104  
 Uric calculus, IV. 508  
 Urinal dropsy, IV. 459, 495  
 Urinary calculus, IV. 499

Urinary sand, IV. 502  
 ..... gravel, IV. 503, 507  
 Urine, earths, salts, and other principles of, IV. 500  
 ..... bloody, II. 698  
 ..... destitution of, IV. 439  
 ..... stoppage of, IV. 443  
 ..... saccharine, IV. 458  
 ..... honeyed, IV. 458  
 ..... incontinence of, IV. 492  
 ..... unassimilated, IV. 496  
 ..... erratic, IV. 497  
 Uroplania, IV. 498  
 Urticaria, II. 576  
 Uteri procidentia, IV. 148  
 ..... prolapsus, IV. 148  
 ..... relaxatio, IV. 148  
 Uterine hemorrhage, II. 699, 704

## W.

Wakefulness, III. 458  
 ..... irritative, III. 458  
 ..... chronic, III. 461  
 Walrus, I. 4  
 Wart, IV. 659  
 Water in the head, IV. 382  
 Water-blebs, IV. 604  
 Water-flux, IV. 459  
 Water-brash, I. 122  
 Water-pox, II. 600  
 Water-hemlock, I. 208  
 Web of the eye, III. 214  
 Weeping, how produced, I. 443.  
 Wen, IV. 310  
 ..... adipose, IV. 310  
 ..... honied, IV. 311  
 ..... horny, IV. 311  
 Wheal-worm, IV. 651  
 Whelk, II. 294  
 White-gum, IV. 547, 550  
 White-swelling, II. 537  
 Whites, IV. 66  
 Whitlow, II. 296  
 Whizzing in the ears, III. 249  
 Wild carrot, as a diuretic, IV. 449  
 Wind-cholera, I. 252  
 ..... cholc, I. 209  
 ..... dropsy, IV. 423  
 Winking, III. 419  
 Winter-cherry, IV. 453  
 Wit, how it may exist without judgment, and hence in insanity, III. 80  
 .... crack-brained, III. 137, 139  
 Witlessness, III. 190  
 Womb, inflammation of, II. 403  
 ..... falling-down of, IV. 148  
 ..... retroverted, IV. 150

Worm-grass, I. 324  
 Worm, goose-foot, I. 319  
 Wormwood, I. 167  
 Worms, intestinal, their ability to resist digestion, I. 16  
 ..... various species, I. 290.  
 ..... long round, I. 297  
 ..... thread, I. 298.  
 301  
 ..... tape, I. 298  
 ..... broad tape, I. 299  
 ..... maw, I. 301  
 ..... erratic, I. 304  
 ..... hepatic, I. 407  
 ..... vesical, IV. 455  
 Worm-seed, I. 313  
 Wry-neck, III. 310

## X.

Xanthic oxyde of the bladder, IV. 501

## Y.

Yam, I. 4  
 Yawning, III. 426  
 Yaws, II. 670  
 Yellow fever, how far approaches typhus, II. 71  
 ..... description of, II. 144

## Z.

Zaruthan, II. 816  
 Zona, IV. 609  
 ..... ignea, IV. 609  
 Zoster, IV. 607. 609.

END OF VOL. IV.



ERRATA. VOL. IV.

- Page 32, After *than*, last line, omit *in*.  
258, For FALSE CONCEPTION, three lines from the top, read SPURIOUS  
PREGNANCY.  
278, For *abraid*, seven lines from the top, read *abraded*.  
287, Before *poisonous*, ten lines from the bottom, read *a*.  
362, For *hydrogogue*, six lines from the bottom, read *hydragogue*.  
576, For *indiscriminatively*, fourteen lines from the bottom, read *in-*  
*discriminately*.  
580, Omit *hence*, thirteen lines from the bottom.  
583, After *that*, three lines from the top, read *it*.  
584, Before *whiteness*, six lines from the bottom, add *the*.

















